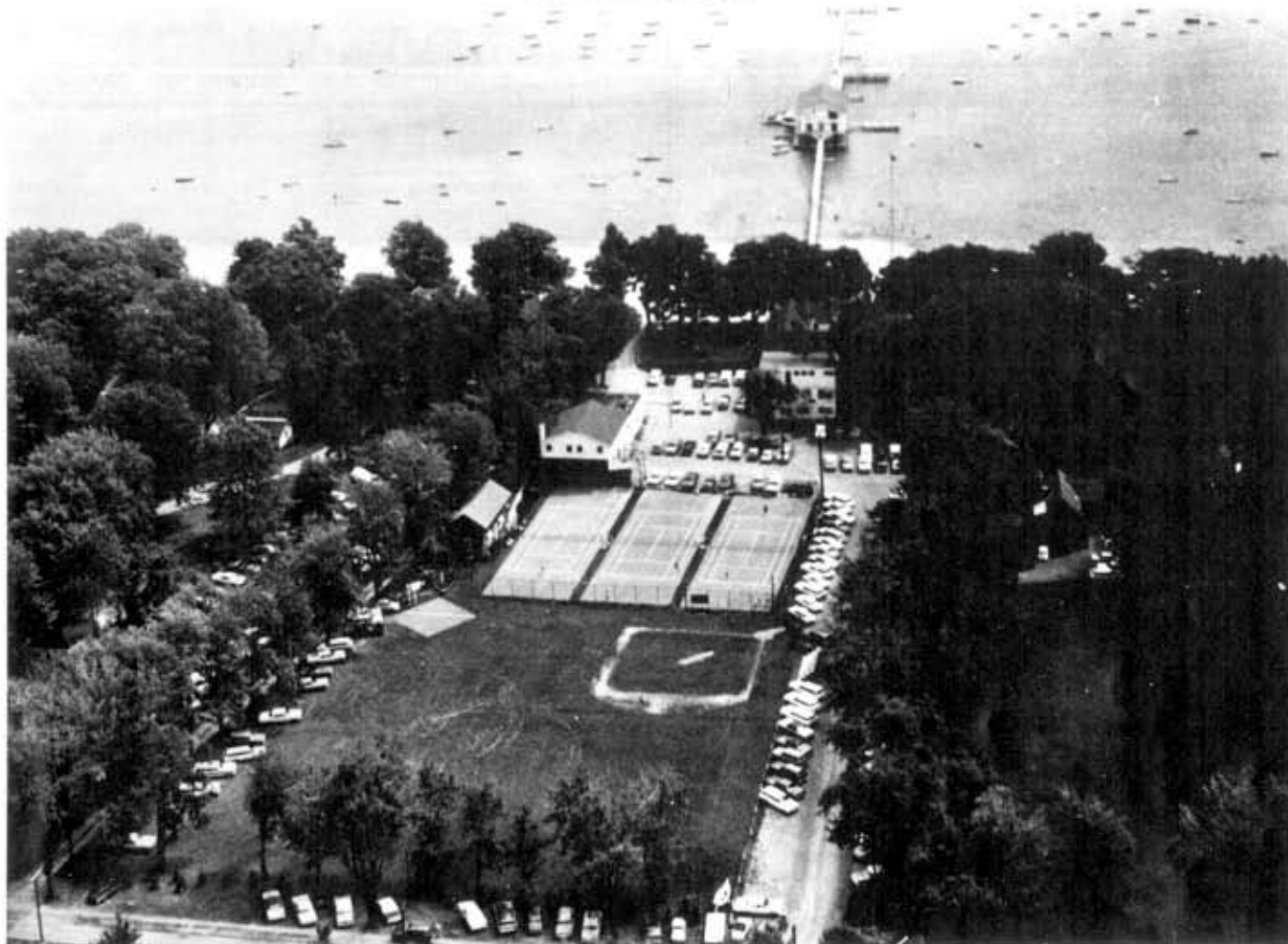


BCC PREPARES FOR THE 1973 WORLDS

by Ed Roseberry, Jr.



Aerial view of Buffalo Canoe Club.

Plans are being finalized by the members of the Buffalo Canoe Club, home of Fleet 12, for the most important Regatta in the Club's history — the 1973 Lightning World Championship. It is an honor and challenge to host this event, and have the opportunity to repay our international visitors for the hospitality extended at recent Worlds. Our great friend, the late Tomo Fallon, organized the jet trips for the North American contingent to Lima, Naples, Olivos and Helsinki. Through Tomo's promotion many Buffalo area residents joined these exciting charters. These people are working hard to give our guests an equally memorable experience in 1973.

The BCC, located at Ridgeway, Ontario, Canada, hosted the North Americans in 1944, '48, '50, '53, '56, '62, '66 and '69. Members include defending World Champion Bill Shore, Tom Allen, Karl Smither ("Mr. Lightning"), Stu Anderson and C. O. Jones, ILCA President. Lightnings became part of the BCC scene in 1939 and have been the Club's most active class since then. Fleet 12 is in the Lake Erie District and has 40 Lightnings, of which 25 race actively. The sailing season opens May 1st, with ice floes often present, and runs through September. Other classes include Knaars, Flying Dutchman, Albacores and Sharks. The juniors also have an extensive sailing program, taught in 420's and Tech Dinghys.

Ridgeway is a town 10 miles west of the Peace Bridge

which spans the Canadian and U.S. borders at Fort Erie, Ontario and Buffalo, New York. The Regatta site is on Lake Erie at Point Abino Bay, two miles west of Ridgeway.

Club facilities include a beautiful sand bathing beach, great for the family, four tennis courts, and a baseball field suitable for touch football and soccer games. There is also a large dining room, snack bar and lounge.

Karl Smither and Curt Montgomery, Worlds co-chairmen, advise that the Regatta will run from August 10-16. One race is scheduled Sunday the 12th, two races the 13th, and one race on each the 14th, 15th and 16th. Race Chairman will be Al Bernel, a onetime top Lightning skipper, who has served in this capacity for many national championships, including the 1966 and 1969 Lightning North Americans. Al is a real perfectionist, second to none — the very best.

Stu Anderson, who became famous at the 1961 Worlds with his patched up "Glockenspiel," is Borrowed Boat Chairman. Stu will have fully-equipped-for-racing fiberglass boats available and asks those interested to write him at 130 Crowley Avenue, Buffalo, New York 14207.

Entertainment Chairman Jack Haggerty is planning parties and short excursions for our guests. One of the events on the entertainment schedule is a trip to Niagara Falls, one of the greatest natural scenic wonders of the American continent, only 20 minutes from Point Abino.

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Housing Chairman Marie Fallon requests that you write her immediately at 696 Auburn Avenue, Buffalo, New York 14222, indicating the number of people in your party and type of accommodations preferred. Club members living in close proximity will provide housing. Motels are also available within 15 minutes of the Club.

Other committees and their chairmen are: Measuring - Matt Bryant; Publicity - Ed Roseberry, Jr.; Trophies - Tom Allen; Stakeboats - Ed Hansen; and Boat Handling - Harold Huston.

Major international airports in the area are at Toronto, Canada and Buffalo, 1½ and ½ hour drives respectively from the Regatta site. Buffalo is an hour flight from New York City and 1½ hours from Chicago.

Buffalo's population, including the surrounding communities, is 1,350,000. Among its attractions are the Albright-Knox Art Gallery, the Buffalo and Erie County Historical Museum and two State Universities. Toronto, the hub of Canada, offers superb dining, theaters and sight-seeing.



1973 World's Logo

Races will be sailed on open water, approximately two miles from shore, with steady southwest winds prevailing in the 10-20 knot range. Since the course is at the eastern end of Lake Erie, high seas can be encountered with a heavy southwest breeze. Offshore northerly winds can be light or heavy, with oscillating shifts of varying degrees. East and south winds are usually light and unpredictable. Complete detailed weather information will be published later.

A beautiful new 36 foot fiberglass committee boat, Burgee V, was launched in August, 1972. The yacht is designed for race committee service and powered by twin 225 HP engines. Bill Hughes, well-known Lightning skipper and BCC Commodore, spearheaded this project so the boat would be ready for this Championship.

We know the races will be most exciting, with champions from Canada, South America, Europe and the U.S. after Bill Shore's title. Plan to spend this week at Abino Bay even if you are not racing. See you then!

THE ANATOMY OF CHANGE

by Robert K. Smither, Chief Measurer

Anyone looking back through the old copies of *Lightning Year Books* and *Flashes* will find many articles concerned with the problem of keeping the *Lightning* modern, using the latest in go-fast gear and techniques, new building methods and materials, and so on, while still maintaining its inherent one-design character. (See Jim Carson's article in the 1970 *Year Book*, for example.) If you add to these the articles in the leading yachting magazines by editors and famous yachtsmen, the list is quite long. Everyone has his own opinions, solutions, axes to grind, etcetera, but underneath it all one finds a common thread of ideas and accepted facts, a set of bare bones if you like, with which almost everyone agrees. These bare bones are very useful to a class officer as a guide when he is faced with difficult decisions concerning change in his class. Since the Class is at this time feeling more than the usual amount of pressure for change, I would like to try applying some of this basic anatomy to the *Lightning* Class. First a few descriptions are in order.

Bone 1. The ability to change in an orderly way must be present as a working part of the system if it is to survive.

Bone 2. The amount of change or rate of change needed at any one time depends on the outside environment and is usually not under the control of the class officers.

Bone 3. Too much change can be as bad as too little.

Bone 4. A class can change and still remain a one-design class.

Fortunately the Class has always had a group of conscientious officers and concerned, hard-working members to look after it. Its growth to over 12,000 boats in thirty-some years and its strong, active Class organization and racing activities suggest that its past officers and members have done a pretty good job of guiding its development. Many changes have been made as the Class has grown, some of them equally as dramatic as those being proposed now. We gave up the pin rail with its wooden belaying pins, the cockpit coaming that vaulted 3" above the deck, and the cotton sailcloth with all the games one would play trying to make the cotton sails take on the right shape. I can still remember, as a junior sailor, standing on the foredeck and swaying on the jib halyard while my fellow crewman tailed it around one of those wooden belaying pins trying to get the jib luff a bit tighter. Certainly the change that occurred when the average weight of a new *Lightning* dropped from 850 pounds to 700 pounds was equally as drastic as any now under consideration. To be sure it did not require a specification change but it did make a dramatic change in the performance of the boat. To say the *Lightning* cannot change and still remain a one-design class is to ignore our own history (Bone 4). The important thing is how these changes are made. Some of them might have seriously hurt the Class if they had been handled differently (Bones 1 and 2).

At the moment the engines of change are fired by the competition for membership between the *Lightning* Class and the many new classes that have appeared in the last 20 years. The sailing boom which followed the upsurge in economic wealth around the world (particularly in Europe and the U.S.) is expected to continue as long as we do not go through a severe depression, so things are not likely to change for a while to come (Bone 2).

One of the forms of muscle used in competitive efforts (at least in the free world) is that something called price. If you can deliver a similar service or product at a lower price, you can compete favorably with your competitors. The breakdown in the cost of a new *Lightning* is illustrated in Figure 1. By far the largest portion of this cost pie (42%) is connected with the production of a fiberglass hull and deck. When you add to this the cost of all the racing gear and labor to complete the assembly (13%), the finished hull and deck add up to 55% of the total cost. The next biggest item (11%) is the sails (main, jib, spinnaker). Since most racing skippers have at least two suits of sails in the locker after a few years, this fraction of the pie doubles as the boat grows older. Next come three pieces of about equal size, the rigged mast (wood, 8%), the trailer (8%), and the stainless steel centerboard (7%). Finally the rigged boom (2%), the rudder and tiller (2%), and things like the spinnaker pole at 0.5% or less. The slice of the pie labeled "Extras" (8%) includes such items as the anchor, paddle, life preservers, large compass, boat cover and rudder cover. By using an untapered aluminum mast one can save 2% of the cost. Substituting a regular steel board (painted) saves 5%. About one-half of the "extras" are not essential to competitive racing so one could save another 4%, making a combined reduction of 11% in the cost of a new boat. Substituting an aluminum centerboard for the painted steel board might save another 1%, but it could cost more if you have the manufacturer do a fancy shaping, polishing and anodizing job on it.

COST OF A NEW LIGHTNING

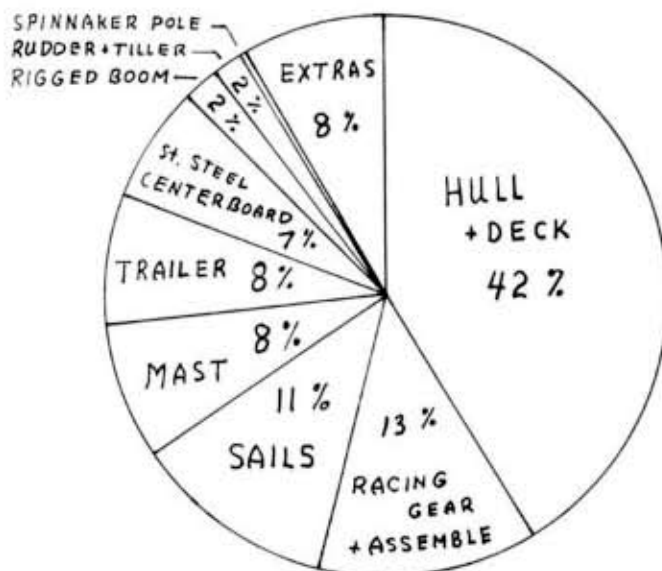


Figure 1

Obviously, the more one can trim from the new price the more competitive will be the new *Lightning* with other boats. The present Measurement Committee is well aware of this situation and looks at all the proposed changes to see how they

would affect the cost of a Lightning. Clearly, any big saving will have to come out of the "Hull and Deck" piece of pie. The Measurement Committee would like to help, but the major share of the responsibility for cost reduction in this area must be shouldered by the boat builder. The Class officers come and go too quickly to attain the necessary expertise. The only other rational approach would be to hire some professional talent. One thing that must be guarded against is too many changes or too rapid a rate of change (Bone 3). If the boat builder is forever making new molds and changing production techniques, the new boat cost could go up rather than down as was the purpose of the change (Bone 3).

I personally feel that the new boat cost is not the right cost to consider when looking at the competitive position of the Lightning versus other classes. I think that the more appropriate cost to consider is the cost to a new sailor to join the group and start racing. Here I am talking about the cost of a competitive *used* boat. In the present market this cost can be as low as half the price of a new Lightning. In the newer classes the joining price is close to the "new" boat price because there are not many used boats available. I believe that it is this used boat price edge that has allowed the Lightning to compete with the new classes as well as it has. If this belief is true then it behooves us to protect that edge, which means protecting the competitiveness of the used boat.

None of the wildest boat alteration schemes I can imagine come anywhere near offering a savings of this magnitude. This price advantage comes from having a large number of boats actively racing in one area (U.S. and Canada). The reverse situation is true in most European and South American countries, and explains why many of our friends from abroad sometimes see things in a different light than we do. They are seeking to establish the Lightning as a new class and must use the new boat price as the cost of becoming part of the Class. This dual nature of the Class complicates the decision-making process. What is good for the U.S. or North America may not be so good for the rest of the world. I believe, therefore, that we should use a different policy to promote the Lightning in Europe and South America (and the rest of the world for that matter) than we use in the U.S. and Canada. Taboos like not spending any promotion money should be reconsidered. I would like to remind the older members of the sales pitch used by John Barnes of the Skaneateles Boat Works in the early years of the Lightning Class. For those of you who are too young to remember, it was a smooth pitch which left the local sailor with a sort of WOW! feeling. Without such promotion in the early days the Lightning might never have developed into the large, successful Class it is today.

What we need are some Senor Barnes or Herr Barnes in South America and Europe. Actually we are very fortunate in that we have some such people. For example, surely the efforts of Dr. Jean Hess (Swiss ILCA Commodore) and Herr Heini Zollinger to have a European-built Lightning in the International Boat Show in Friedrichshafen, Germany come in this category. Similarly, so do the efforts of the European boat builders Jack Beck (Swiss), who built the boat taken to Friedrichshafen, George Efentakis of Fibra (Greece), and CIMA in Italy to make fiberglass Lightnings available in Europe at competitive European prices. Also, the efforts of Senors Pedro Sisti, Osvaldo Bordino, and their fellow countrymen to have a fiberglass Lightning built in Argentina, as well as the efforts of the Lightning sailors in Brazil, Colombia and Peru are very important to the Class. We also have a number of active vice-presidents around the world, including Senor

Denis Clemence of Brazil who is now our Vice-President for International Affairs. If we wish to see the Class grow internationally we must listen to these gentlemen and do what we can to help. They will need all the help that they can get. The competition is much tougher now than it was when the Lightning got started in the U.S.

The second most important type of competitive muscle is performance. A change that improves the overall boat speed can improve your competitive position. The trap that must be avoided here is not to forget who your prospective buyers are. If you make changes to attract a few new customers and thereby lose all your old ones you are in trouble.

Well, who are our prospective customers? In the past we have done well with the juniors. Some of the important advantages here are the three-man crew which allows a novice to race, and a very large spinnaker which is a real tiger when everyone weighs 90 pounds or less. We are also popular with the families where wives and kids want part of the action. Again, it is the three-man crew that helps make the Lightning attractive. The Lightning also attracts a fair number of high caliber sailors. The magnet here is the superior level of competition at the larger regattas, and the large number of boats in the Class. We are also popular in the over-40 age group where tactics and sail trim are emphasized more than physical strength. The four groups work together quite well. The junior programs get the whole family interested. The family sailing gets the youngsters started early which leads to lots of pretty good sailors. In turn the good sailors upgrade the level of competition at the major regattas and attract the super-stars. They in turn attract the younger generation and give the boat some prestige. This attracts the over-40 group who are usually fathers and who supply the cash needed to buy boats for the juniors. Thus the cycle is completed. The key seems to be the strength of the local fleets, the junior sailors and the families. It is from here that we generate hot skippers and super crews. To maintain our attractiveness with this broad spectrum of sailors it is necessary to add longevity and seaworthiness to our list of priorities.

In conclusion then, I believe that the biggest market for the Lightning is the average and better-than-average weekend racer, especially on the Great Lakes and larger bodies of water where strong winds can generate large rolling waves. The typical weekend racer appreciates having a bit more boat under him in these conditions than is provided by most of the two-man dinghies.

Whenever I am trying to compare the merits of different systems affected by multiple parameters I find it useful to try to make a picture or graph of the relationships. In Figure 2 I have tried to relate the size, performance, and popularity of the one-man, two-man and three-man sailboats raced in North America, South America and Europe. Each point in the graph represents a class. The squares are one-man boats, the circles are two-man boats and the triangles are three-man boats. The vertical position of the point corresponds to the overall length of the boat, with longer boats plotted higher. The horizontal position is the relative boat speed under average conditions with the faster boats being plotted farther to the right. The area of each point is drawn proportionally to the number of boats in the class (total for the world). The larger points correspond to the bigger classes. Both the vertical and horizontal scales are log scales. This type of scale has a very useful feature: a constant length or separation between points corresponds to the same percentage change no matter where you are in the graph. Thus a boat that is 10% faster will be the same distance to the right of the

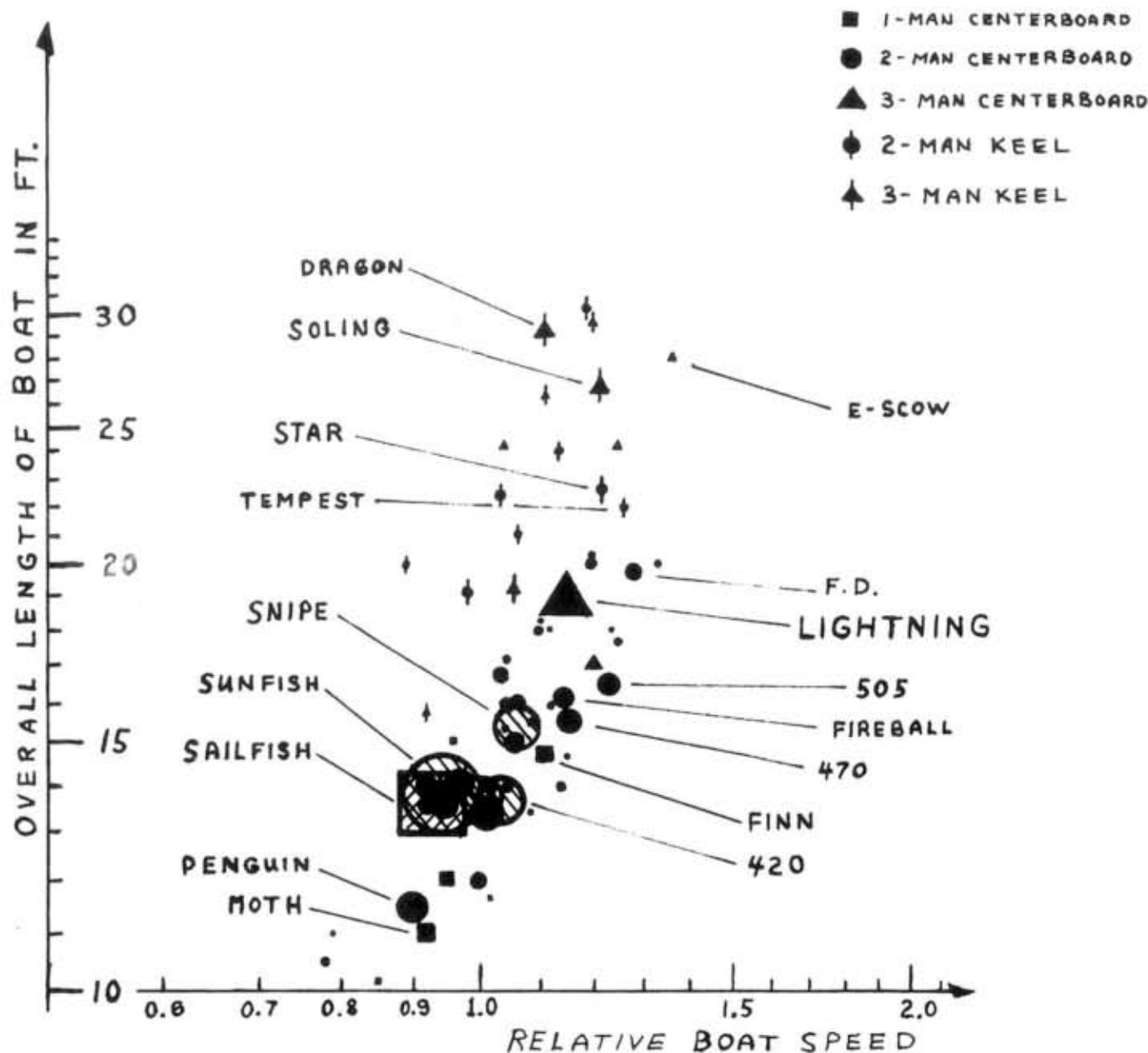


Figure 2

other boat no matter where the two are located in the graph. This helps one keep a sense of proportion which is often lost in a linear graph.

The largest three-man class is by far the Lightning (see large triangle) which dominates its region in the graph. Most of the action in the two-man classes comes lower in the picture between 13 and 16 feet overall length. The Snipe, the 420 and the Enterprise are the moderately large circles in this region. The largest two-man boat (see largest circle) and one-man boat (see largest square) are the two surfboard boats, the Sunfish and Sailfish. The Olympic boats, the Finn and the Flying Dutchman, fall to the right of the main group, indicating that their average boat speed is higher than most boats of equal length. This speed factor is true also of boats like the 470, 5-0-5, and Fireball which have relatively low boat

weight compared to crew weight, large sail area, and use a trapeze.

The Lightning falls more in the middle of its length group as do the other large classes. One cannot complain about the present position of the Lightning. It is the question of how this picture might change during the next ten years that causes concern among your Class officers. Things do not look so favorable when a similar graph is made for Europe alone. In this case the Lightning Class shrinks to a small triangle. Here we are a developing class rather than a large, well-established one. This different picture (which is also representative of South America to a lesser extent) will call for a different course of action by the Class officers than that which is followed in the United States and Canada.

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STEERING THROUGH WAVES

by Jim Dressel

How many times have you been beating to windward in a lumpy sea and watched a few boats moving much faster than the great majority of the fleet? Steering a Lightning through large waves can be very frustrating for most of us in such cases. However, there are ways in which a skipper can improve his performance in rough water.

In my opinion the most important aid is to recognize quickly the wave condition and automatically adjust the sail trim and the balance of the boat to achieve the fastest boat-speed possible *before* your competitors react. This can only be achieved as a result of many hours of similar sailing experience. I try to sail as much as possible on the Great Lakes where rough water can be expected, especially in the spring and fall months. Experience will always be the best teacher.

During the winter I make a tentative regatta schedule for the coming sailing season. Since I sail on a small inland lake in Ohio, sailing on open water at various times during the summer is a must for myself and my crew. We try to select regattas which will help us prepare for our District Championship and the North American Championship. Sometimes this is difficult, but with a little research I can usually get a good idea of what type of weather condition to expect for that particular time of year.

After arriving at a regatta, ask a good helmsman if he would "brush" going to windward before the series begins. An example of how this can help takes me to Chicago in late summer '72. I sailed (brushed) against a very good helmsman for about 30 minutes prior to the first race in a 12 MPH on-shore breeze on lumpy Lake Michigan. From the start of the race we both had good boatspeed and were first and second around the weather mark only because we were steering well in the rough water. Our two boats had an advantage because we were prepared for that water condition. Once the rest of the fleet reacted and adjusted their equipment, the relative speeds were the same.

Each wave condition must be approached in a different manner. First, let us assume we are sailing in relatively flat water with varying velocities of offshore wind 8 to 15 MPH. In this situation I let the boat heel very little, the centerboard is completely down and sails are trimmed relatively flat. My jib leads are about on the 7 degree line with the boom almost centerlined. (If the mainsail is tight leech, the boom will be 3 to 8 inches leeward of centerline.) The mast is bent enough to flatten the mainsail relative to the power desired. The main and jib can be trimmed very close when the wind increases. I try to steer with no flutter in the luff of the jib, letting the boat ease higher whenever possible until the boat-speed starts to decrease, then steering down a slight bit. Adjust the mainsail with the jib so they both backwind about the same time. Try to keep your steering motions smooth but exact. Always try to steer the boat from the windward side where you can see the water, both the main and jib, and the tell-tails.

As the size of the waves increases more power must be generated in the sails in order to keep boatspeed consistent to let your boat punch through the waves. For example, let us assume we have a wind velocity of 12 to 18 MPH and choppy water. In this condition keep your sails relatively full until you reach the point where you cannot hike the boat

flat. Jib leads are set on the 8 or 9 degree line. Bend the spar, thereby loosening the leech of the mainsail until you can adequately steer the boat through the waves. It is very important not to let the boat heel excessively. The greater the angle of heel, the more the waves tend to push the boat to the side, increasing sideslip. If you see a large wave or series of waves approaching, pinch a little through the wave's crest. Although you will lose a bit of boatspeed, you will gain a little to windward without being pushed down by the wave. You must steer the boat firmly and not let it follow its own course. Various types of waves may modify this rule, in which case you must rely on your experience.

Generally speaking, I try to sail with the jib full, trying not to pinch or feather excessively in puffs. Again, only generate that amount of power in your sails that you can handle. As the wind velocity increases in rough water, flatten your sails (reducing power) in order to keep control of your boat. When it is time to tack, try to come-about between large waves and before the next wave's crest. If the wind velocity is over 20 MPH tack as little as possible.

Sometimes we must sail in a rough sea with very little wind. In this situation try to generate the maximum power from your sails. If there is not enough wind to let you punch through the waves, heel the boat a bit more than normal so the leeward chine cuts through the waves. You should not

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pinch in this condition and never hold a luff on the larger waves—bear away more than in a “no-wave” condition, always keeping the boat moving at maximum speed. Try not to allow the pounding waves to affect your concentration. Remember, every boat on the race course is sailing in the same condition—“good psych” is important.

If you are sailing slower than most to windward in lumpy water, check the leaders’ sail trim. In most cases you will find

that your sails are trimmed poorly for that particular wave condition and, correspondingly, your steering is poor. Be willing to change mast bend, sail trim, etc., until you again have good boatspeed.

I believe steering a Lightning in rough water is quite challenging but seldom mastered. Practice and experience will be your best allies in gaining some degree of proficiency, however.

USING YOUR ADJUSTABLE BACKSTAY

by Bruce Goldsmith

The primary purpose of the adjustable backstay is to bend the mast easily by pulling back on the head of the mast, against the forestay and jib luff wire. This mast bending in conjunction with stretching the mainsail luff flattens the mainsail. In general the mainsail should be fuller for light airs and flatter for heavy airs. The whole idea is to be able to use one mainsail efficiently through all weather conditions, and to be able to adapt easily to changing conditions throughout a race.

Upwind

Backstay tension will vary greatly with a number of different variables besides wind velocity. We’ll get into some of those specific situations, but first let’s establish some guidelines. In all conditions you want to set your sails for almost a neutral helm, or at most a very light weather helm feel. A fuller mainsail gives more weather helm; if the main is too flat the boat will have a lee helm. Acceleration is caused by a fuller sail with a looser leech. Both high speed and high pointing once the boat is up to speed are obtained with a flatter leading edge (luff) and the draft further back (tighter leech). For upwind conditions we should think of the backstay and cunningham as our mainsail total draft control, and the mainsheet tension as the leech control. You should work the two together to reduce the draft and move it further back by increasing tension on both the backstay and the mainsheet.

If we then get into a tacking duel, or for any reason get caught in a stop and start situation, we go back to the acceleration setting of less backstay tension and less mainsheet trim. Keep in mind that changes in wind velocity will change the helm of the boat and greater mast bend will reduce weather helm, and less mast bend will increase weather helm. Attention to this fact will keep your main set at least in the right ballpark for the conditions at that moment.

In light air the boat may be faster with less rake in the mast. To reduce rake pull the mast forward with the jib luff wire, then use only enough backstay to hold the rig from bouncing around. In heavier air let the jib luff wire off until it is equal in tension to the forestay. Then honk on the backstay for both bend and more rake, and as long as the main is flat enough having the mast raked back more will not increase the weather helm. The boom will be closer to the deck and the boat becomes more stable in this condition.

Reaching

When reaching in any wind where you are under control let off the backstay only enough to let the mast straighten for more mainsail draft. Don’t let off so much that the mast

flops forward. This mast setting seems slow and I’m not sure why; possibly more centerboard is needed to balance the boat with the mast forward, and more board in the water is increased drag.

When reaching in strong winds where you are unable to hold the spinnaker all the time leave the backstay in the upwind position, and release the vang. The flat main and twisted leech will reduce the heeling and help keep the boat on its feet. You will be able to carry the spinnaker much longer. Also the boom will not catch in the water if you do heel.

Running

When running in any air but survival let the backstay all the way off to the 8” limit so the mast will go forward and the mainsail will be full. In survival conditions, a little tension may help save the mast.

Mast Differences

The above discussion applies to all types of Lightning masts. However, there are great differences in our masts. We have wooden masts which vary from flexible to stiff, all with jumper stays, and aluminum masts which are medium to very stiff, with and without jumpers.

If your mast is too flexible the adjustable backstay does you no good. Your mainsail shape will be determined by the mainsheet trim alone. You then lose the ability to set the leech independently of luff shape. This loss reduces your versatility in a wide range of variables but makes mainsail flattening more automatic with increased mainsheet trim.

The stiff wooden or aluminum mast with jumpers has the advantage of some automatic flattening, yet requires some backstay pull to flatten the main enough. This stiffness allows us to set the leech and luff independently. The jumpers then limit the total upper bend both fore and aft and sideways.

The straight section aluminum mast without jumpers becomes the least automatic in light to medium air. It will not bend as soon without backstay tension but should react to increased backstay tension in stronger winds. The lack of jumpers will make it more automatic in heavy air, due to an increased side bend which tends to twist the main more and reduce heeling. If we can bend fore and aft to set draft and leech with backstay and mainsheet in lighter winds and have the side bend occur in the upper part of the mast automatically in heavy air, we should have an ideal mast. It will, however, require considerable backstay attention in the medium conditions normally encountered. This need for frequent adjustment will discourage some at first, but with practice should make our new straight section, unjumped, less expensive aluminum mast very competitive.



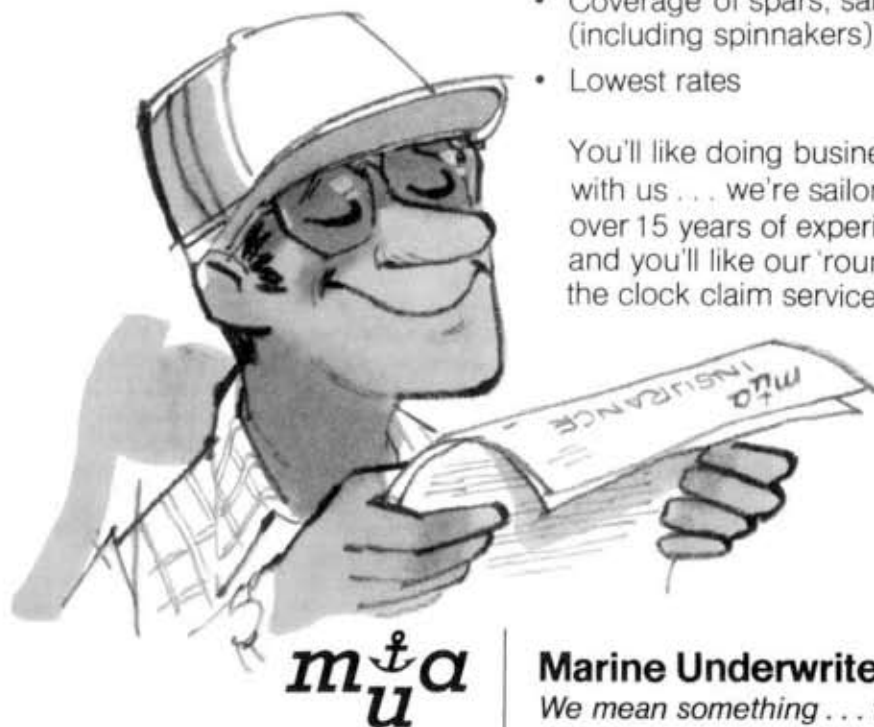
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THOUGHTS ON RUNNING A REGATTA

by Gary Cameron

We all enjoy attending regattas to race our Lightnings and most often we have great times, win or lose. On occasion the weather fails to cooperate during a series and the racing suffers, but we accept this disappointment because you cannot fool with Mother Nature.

However, there are also times when all the ingredients for a fine regatta are present save one—the human element. When a regatta fails because the people in charge do a poor job many sailors tend to gripe about the mistakes, and rightfully so. A few say that we should accept some incompetence from those in charge because at least they are out there working for those of us sailing. That argument is not valid, however; if a club or fleet accepts the responsibility of hosting a regatta then it should insure that the program goes off properly for the benefit of those sailors coming, as guests, to the races.

Start by planning your regatta early. Establish a schedule for the series, and outline all the tasks that must be done before and during the event. Well ahead of time get commitments from people that they will do the various jobs required. Not just anybody should be tapped for the assignments. Be certain that those taking the responsible positions know sailing, and preferably Lightning sailing.

Probably the key man at a regatta is the race committee chairman—the man who runs the races. We are, after all, there for the racing and so long as that phase of the regatta goes well we are usually willing to forgive most anything else.

The race chairman should be familiar with the racing rules and know how to do all the basics—set an even starting line, get a fair start, establish a proper course and finish line. One man cannot do all the jobs. The race chairman needs able assistants on his boat—people who can handle the starting signals precisely, call boats over at the start, record the finishes, and offer sound advice upon request.

The chairman also needs a knowledgeable man in another power boat to set the marks of the course. This crucial mission must be done by someone who can measure distances on the water and get the proper angles for the off-wind legs. The result of this job well done is a competitive, fair race course both on and off the wind.

Mark-setting properly begins about five minutes prior to the start so that the course is based on the current wind direction. Further, by having another committee boat set the windward and jibe marks the race chairman can start the races with the least amount of wasted time since he is not consuming valuable sailing minutes traveling miles to place marks.

A needless irritation is to make the fleet sail around while the race committee seemingly does nothing but delay the start. When crews are getting wet and cold during this wait their irritation intensifies. If the wind is good, the race ought to begin right on schedule.

On the other hand, a good race chairman must recognize when the wind is not suitable for racing. It may be too light and variable, in which case perhaps the race should be delayed until the wind has settled in from one direction at a reasonable velocity. Or, the wind might be very heavy and then the race chairman has another serious responsibility: he must consider the safety of the contestants. Can they handle their boats in these conditions? Are there enough patrol boats to rescue those boats that get in trouble? Additionally, the race committee has to know the weather systems in the area and be ready to judge if impending storms could be dangerous for

those on the water. Whatever the case, the chairman must be careful to let the race proceed only if he thinks both the racers and the race committee can survive the conditions successfully.

The race chairman cannot make some of the other necessary decisions that go with his job without having considerable racing experience himself. He ought to understand what the crews (which frequently include women and youngsters) in the race are going through while they are on the water, and thus know when they want or do not want to race, when they are wet, cold or seasick, when they are hungry or baked dry, or when they might need to use the facilities. Sailboat racing need not be a piece of cake, but neither must it be cruel and inhuman treatment.

Hence, to run a happy regatta it is essential that the right person be selected to run the races. Quite simply, do not give the job to a novice. In addition, the total regatta organization should be headed by someone familiar with such events, preferably someone who has attended other Lightning regattas so that he knows what the sailors expect. Shore activities can also cause annoyance if they do not run smoothly; with luck the person in charge, being a sailor, will know how to avoid the irritants.

From the start of your planning steps can be taken to make contestants happier. For a weekend regatta perhaps the first race could begin Saturday afternoon (thus having back-to-back races that day). A morning start means that the traveling crews must either leave Friday night (with the added prospect of paying for a motel that night) or very early Saturday morning. In either case your guests might be less delighted than if they could make a more leisurely trip Saturday morning to the regatta. An added bonus of the later, more convenient start is that more boats may come to the event.

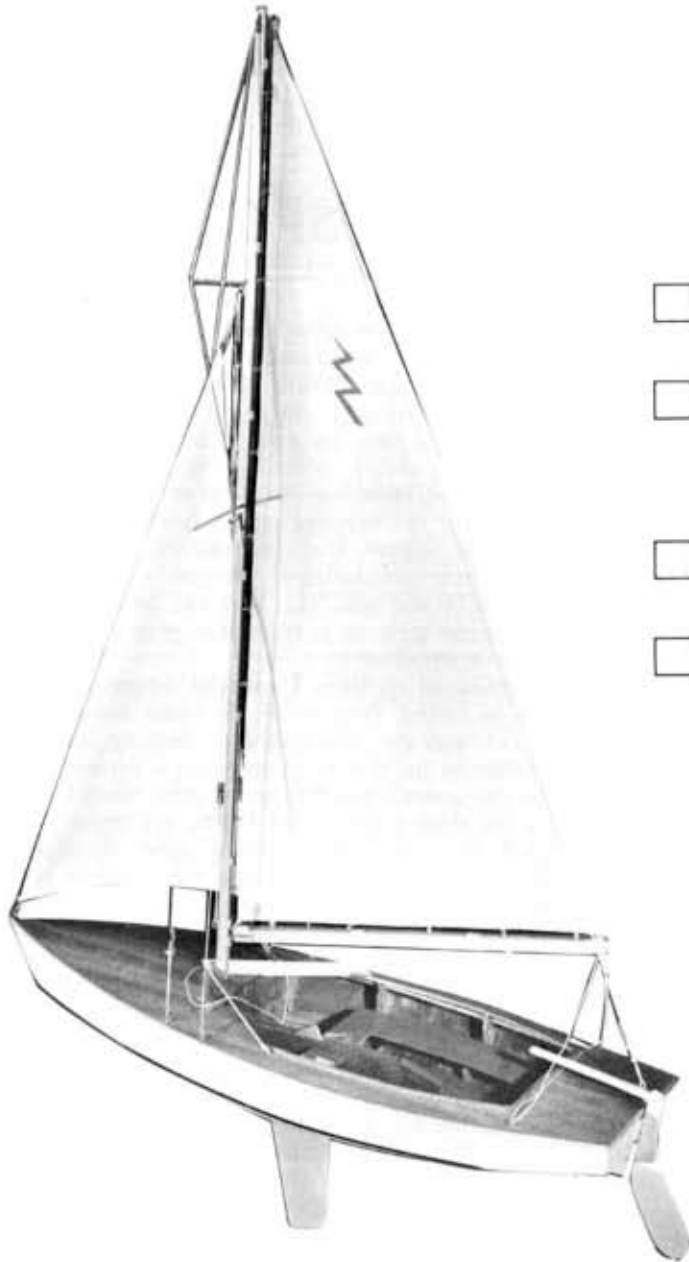
Have someone who knows most of the sailors greet them as they arrive. Give them instructions about parking the cars, putting the boats together, launching, registering and the day's schedule. This thoughtful greeting is easily done and it pleases your guests because they soon feel at home and are quickly into the program.

A member of the home fleet should help visitors launch their boats, particularly if a hoist is used and the crews are uncertain how it works. Further, the launching goes quicker when someone is there to push the process gently along. The same assistance should be offered for haul-out.

Registration fees are the regatta's main source of income. Some clubs look on regattas as a way to make money, while others are just satisfied to break even for the event. Regardless of your plan, entrants will not be unhappy with your fee if they believe they get good value in return. Low food prices, good trophies, a free keg of beer after the races, spectator boats for the non-sailors, coffee and donuts in the morning, and above all a fine weekend of racing are examples of factors that can help offset the bad taste of a high entry fee. In any case, just do not allow your guests to go home feeling that they have been financially taken (ripped off), or they may not return again.

Trophies, or more exactly the lack of trophies, can be a large source of irritation. Too often only the winning skippers receive prizes, while their crews go unrewarded for all their hard work. Crewmen already feel stepped on enough; do not

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make the situation worse by ignoring their contributions to the winning effort. A top skipper will realize the importance of his crew and want them recognized.

Providing crew trophies adds a large expense to the regatta budget, but the problem must be faced. One method of cutting down the cost is to break away from the idea that skippers must get something expensive. Save money on the skippers' trophies and put the savings into crew prizes. There is no reason why the same kind of trophy cannot be given to the entire crew. Remember, it is not the gift but the idea behind it. A trophy need only be a token to commemorate a fine sailing performance.

When running your regatta, have a time schedule and hold to it unless, of course, the weather forces some changes. But if the wind is good do not delay. Leave the dock when planned and start the races on time. Few things are more irritating to

sailors than unnecessary waiting on shore when the conditions are right for racing.

Communication at a regatta is crucial. Tell people what is happening, especially when something has caused an alteration in your plans. Simple, straightforward explanations will stop most of the grouching in the back row.

In sum, the above paragraphs present some items to consider as you plan your regatta. On the whole, Lightning sailors are not the type who complain quickly or without good reason, and they usually think the regattas are great. However, as a host you should remember to treat your visitors as honored guests. Give them the best racing possible. This large order can be accomplished if you plan ahead, get top-notch people for the important positions, and if all your fleet members work hard throughout the entire regatta.

SAILING AS A TEAM SPORT

by Garry Demarest

Years ago as I first began to race sailboats I had some very definite reasons for why I would win or do well in races. At the age of twelve I knew what the secret was, and so in preparation for each race I would select my crew because his telephone number included the number of my boat, or his locker number and the boat number were the same. The day prior to the race I carefully washed the bottom of the boat (as well as its other parts), bade it a fond good night and went home to sleep in the clothes I wore in the last race I won. I was sure this was the lucky combination for winning races.

Today, eighteen years later, I know a little more about selecting a crew, preparing for a race, and racing performance than I did then. I would like to take this opportunity to share with you some of my thoughts.

Being in the business of counseling college students I find myself centering my values on the human potential that is a part of racing sailboats. We know that there are certain conditions which, when incorporated in a group effort, produce maximum utilization of human ability. This process of maximization begins with the selection of a crew.

In my crew I look for physical, mental and emotional potential. I wish I could say there were some absolutes here but there are not. The maximizing condition seems to be the degree to which the three of us can put ourselves together in a whole which is greater than the sum of our parts. For us, this means that I must assess my own strengths and weaknesses in each of the above areas of potential, then begin to find one crew that can fill in my weaknesses with strengths, and another crew to pick up the slack so as to form a strong team covering all areas of required behavior. Two of my dominant assets are my emotionality coupled with a strong sense of intuitive perception. My crew (who has been sailing with me for three years) has strength in his realism backed up by emotion. This seems to cover all areas of perceptive behavior, but together we lack logic in the evaluation of our perceptions. Therefore, I look for a third member of our team who is more analytical and logical to balance our emotionality, and more realistic to balance my intuitiveness. These outside qualities give me a strong counterbalance, or alter ego, and help us become a well balanced team.

The value of all these factors comes through in crew performance. In our boat I want to know what is going on outside the boat, which means a need for accurate information.

Since I usually see what I want to see (intuitively) I need my crew to give me a realistic picture of the situation. Feeding me, as skipper, factual information is one of the most important jobs my crew can perform. Their reports provide me with a sound basis for making decisions. This reporting also gives us an ability to discuss and make good judgments in light of the incoming data. Moreover, the calmness and rationality of the thinking type help to keep a cool lid on the emotional skipper. If the skipper can trust his crew to help him remain calm and feed him good data, he need never take his eyes off the sails. This trust can be built by careful selection of the crew so as to balance your own weaknesses with the strengths of others.

Additional qualities I consider important are more absolute in nature. Because of the team concept (as described above) and the importance of keeping the team together, availability for the entire season is a necessity. I usually outline the season's schedule to my crew when I select them and ask for their commitment before we begin. Then I am assured of a team that can learn, grow, develop, and produce throughout the summer. I look for a person who is in good physical condition and whose weight when added with mine will not total greater than 480 pounds. (Actually 450 is closer to the optimum, but I weigh 200 pounds and so my selection is limited considerably.) A high strength-to-weight ratio is important—greatest strength at lowest possible weight. Also critical is the conditioning necessary to withstand the strains of four hour drifters as well as 30 knot blows. Running (or jogging) for endurance and sweat loss is good preparation for the drifters, and sit-ups help prepare for the blows. These are minimum exercises necessary for some conditioning. (Carl Van Dyne has written some good articles on this subject in the April and May 1972 issues of *Yachting*.) If a person has been active in competitive sports in high school or college he may have developed the attitude necessary to get and keep himself physically fit.

Stamina resulting from good physical conditioning is one factor. A strong mental attitude is another. This attitude is built when we as a team have a purpose. The skipper, as coach and team captain, has the responsibility of instilling the competitive spirit and keeping it directed toward a purpose. Sometimes our purpose is to win only one race, sometimes a regatta, sometimes to be in the top ten, sometimes just to have fun. But at all times it is our aim to work together as a

team, to do our best individually in a way which harmonizes our group effort. Because I believe in the team approach, I need to have a crew who is anxious to learn, can face all the ups and downs of competition, can bear the disappointments as well as the joys, and can experience satisfaction and pride in accomplishing our purpose. Above all it is important that I like and respect my crew as a person, that I have a good feeling about him. In turn I hope and expect that he will like and respect me. Being an emotional type, I need support and encouragement from my crew to keep me going just as I know they will need the same from me. I want to know that as a team we can mentally bounce back from a bad tack, unexpected windshift or unavoidable 720.

As coach and team captain it is also my responsibility to teach my crew as much about the sport as I possibly can. This instruction begins with practice sessions of drills and match racing on weekends with local sailors before the season starts. In addition, the crew is provided with reading material covering all aspects of racing. While sailing out to the starting line I take advantage of that time to discuss race strategy so they get to know my reasoning as well as learn what to look for on the course. Then we try to spend time after the race reviewing maneuvers and mistakes.

I cannot stress enough the importance of teaching a crew all you can so they are able to think with you and anticipate your maneuvers, particularly in tight tactical situations. In a sense, such teaching is like a football team practicing how to gain ten yards on a broken play. One way to develop this expertise is to practice around buoys, making mistakes happen so the crew must react to the unexpected. The goal is to perfect the crew so that they can accomplish all tasks without fault. Then, along the way, the crew will develop confidence in themselves and each other, and I will gain confidence in them. Above all, confidence is key to a positive mental attitude. If I work my hardest to prepare myself and my crew, then I can be certain that as a team we will win our share of races, regattas and championships.

There are more visible aspects of coaching and organization that promote the spirit of teamwork in sailing. These stem from the attitudes we as skippers have about our crew. Some times I wonder if we stop to think long enough about the reasons people crew for us in the first place. A Lightning sure would be a difficult boat to sail without a crew. As a skipper I would be nothing without them. I believe each of us is just as important as the next in our total team effort. To make this idea more visible, I provide uniforms for my crew so we can feel a part of each other and will be identified as a team by other competitors. At age twelve I believed the shirts helped us win. Now I know it is the good feeling of wearing them together that helps us do our best. We want to be proud of being a part of a winning combination. Besides shirts, I make sure my crew is fitted out with foul weather gear and good deck shoes. His equipment is important for him to do a fine job. If he is warm and happy and knows you care about such things, he will give it all back to you on the race course.

A crew needs to feel your respect and care for him as a person. There is nothing more humiliating than to be yelled at in front of an entire fleet of competitors. As skippers we hardly show care and respect for our crew if we verbally abuse them on the boat. It becomes worse if we talk about them behind their backs on shore, blaming them for our mistakes and building up their blunders to minimize our own. For the most part, our anger toward our crew emanates from our own high expectations for their performance on a job for which they have not been adequately trained—*by us*.

A feeling of worth in the crew can be enhanced by their inclusion in the social circle of skippers. Too often our crews are forgotten when we step ashore and are left to socialize with other crews who have also been left behind. We can be more aware of recognizing their contribution when the trophies are presented. I am appalled by the number of regattas at which no crew trophies are awarded. Our District (Michigan) has passed a resolution requesting every club that sponsors a regatta to provide crew trophies. Perhaps other Districts will follow suit.

Being a three man boat, the Lightning is dependent on a crew, and in many ways crew members are the life blood of our Class. Training them well, teaching them well, and respecting them as potential skippers all go a long way toward keeping them interested in sailing and sailing in our Class. Each one of us needs to do what he can to get and keep new young people in our boats. And, once there, reward them with respect, dignity, care and opportunity. Several Districts now sponsor junior regattas for younger sailors, providing them with the chance to take the helm. I try to let my crew skipper a race during the year (this year he had a 5th out of a 32 boat fleet in the first race he ever skippered). Perhaps we need to provide more opportunities for this type of participation.



Team—Winning

Parke Photo, Dover, Delaware

Since I was twelve, I have spent hours and hours tuning a boat that is basically one design. This means I have spent considerable time experimenting with mast position, rake, shroud tension and a host of other variables—hours that I could have saved had I simply followed the builder's tuning instructions. I have spent hundreds of dollars buying the same sail that everyone else had, hoping mine would be just a bit faster than the rest. But in those eighteen years I wish now I had spent more of that time and money on training and providing for a crew that was the best I could develop. The boat and sails are basic and it is important that your equipment be competitive. It is also important that you continue to learn all you can about the sport. But when it comes time to put it all together, find yourself a crew that can be formed into a solid team, and spend your time tuning them as well.

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ROOKIE IN THE RACE

by Rick Chapman

It was a sunny day with winds from 12 to 16, though from which direction I'll never know. The fact that I was supposed to know is irrelevant, you see, because this was to be my first race directly in front of the tiller and there seemed to be more important things to worry about then.

I did have a few advantages to counterbalance my lack of experience. One was Garry Demarest, and the other was Gary Cameron, both past North American skippers. My crewing experience with Garry served me well too, as I was able now and then to dredge up a few of the old cliches my skipper uses on me. Truthfully, however, the brains of our vessel rested in the minds of the crew—I was only the instrument of their desires. Having set the scene, I'll try to relate some of the more interesting aspects of sailing that first race from a crew's (skipper's) point of view.

The battle plan was for each of us to sail one race of the three race Devil's Lake Lightning series. This arrangement suited me fine because one was all I could take, both physically and mentally. Now for those of you who have never sailed at Devil's Lake, let me say that some interesting challenges exist there. Like instant 20 degree windshifts and occasional rocks and sandbars. I made immediate note of a windshift on the way out to the starting line as an uncontrolled, unannounced jibe nearly decapitated my middle man. He also made a mental note, although his wasn't about the wind. Having arrived safely at the starting line I decided to sail up the first leg to take some wind readings and see what it was like to be close hauled. Right away I knew I was going to have problems coming about, because on the first tack the tiller stabbed me in the ribs and pinned me on the high side with the boat about to capsize. Luckily I had my hand on the main sheet and reacted quickly enough to fend off disaster and plead with my crew to remain. This they did with increasingly grave reservations.

The 10 minute gun sounded and instant panic swept over my body. Where do I start? Which end is favored? Who's the competition? Before I could answer these questions for myself there were only 30 seconds to go and we were lined up for the start. A miracle occurred three boat lengths to windward of us when two boats locked spars. The shouting was music to my ears. The result was a perfect start for us, and we were off. Shortly after the start we got headed and a big hole opened up to windward. Decision time. From up front the command came, "Tack." Instant pain as the tiller cut into my side. Oh well, we only lost a few boats.

Halfway up the first leg, Dave Peters misjudged a port-starboard situation and fouled us. I fell off and let him go, but not for long. When each of us tacked over we were on another collision course, only this time I was on port. The inevitable occurred—I fouled him without even looking up once. My crew Gary Cameron smiled grimly and advised, "It's nice to collect those favors, but don't use them up so fast." Tacking continued to be a comedy up the weather leg, but I avoided any further mishaps.

"You know, we ought to be close to the first mark," observed Cameron. "Fall off, we overshot," commanded Demarest. Little did they know that I never saw the mark until the second time around; my eyes were on that jib continually out of fear of constant reminders not to pinch. Fortunately the second leg was a jib reach, during which I was informed

that we were firmly cemented in 13th place. I really didn't feel too bad; at least we weren't last. The jibe mark was just ahead and visions of horror filled my mind. I closed my eyes and prayed. Not bad, as the sight of a billowing red, green and white spinnaker soothed my nerves. After a third of the leg I calmly got up the courage to remind Garry to let off the outhaul. (Way to go, skipper.)

At the leeward mark we almost didn't make it. I'm sure most of you have been in tight situations at marks before, but this was something I just didn't need at the moment. I could see it coming about halfway down the leg. I was going to have to give room to two other boats, one of which eventually stalled right at the pin. Forgetting the boat directly to windward of me, I headed up and took the stern of the stalled craft, much to the dismay of everyone—even me. Once again my crew saved me and we not only missed everyone at the mark, we held our position. Looking back on it now I still don't know what I did at that mark other than try, vainly, to trim the main.

On the next leg we caught every windshift and passed six boats to move into 7th place. This was getting to be fun. No change of position occurred on the downwind legs, and there was only one small scrape at a mark—yes, the jibe mark. I really never knew what happened; as before, my eyes were closed.

All of a sudden the leeward mark was upon us again, but now I had a moment to consider my job. Remembering how difficult it had been for me to round up and trim the main before, I was wondering how I was going to do it right this time. I'm a little guy and for me to do all that is virtually impossible. Suddenly the jib was up, Cameron was bagging the chute and Demarest's arm was coming back to the main cam. Now this seemed a little out of place to me, because I had never done anything with the main from the front position. Before I could even move, one swift motion had trimmed both the main and the jib (and, incidentally, hiked the boat flat). Imagine that, a fifteen mile an hour breeze and he trims the main and the jib at the same time.

Awe-struck, I glued my eyes to the sails and we headed for home. Once again the crew commanded my every move and forty yards from the finish line we were in 4th place. Then came a final critical tack to cover Merrill Bales—but alas, the tiller stabbed me one last time and we dropped to 5th. "11954 over," came the call from the committee boat and I felt that the weight of the world had been lifted off my shoulders.

In the second race Cameron really turned it on for us and we won going away. After Saturday's race we were firmly controlling second place overall with our ace in the hole.

Sunday started out like a dream as Demarest pulled out to a half leg lead after the first time around. Miracles (or disasters) never cease though, and as the air died so did we, all the way back to 13th—yet only six boat lengths out of first. Our overall finish dropped to third and my crew let me keep the skipper's trophy—one I'll always treasure.

In tying this together I want to thank all the people of the Michigan District who have made it possible for me to sail and enjoy it as much as I do. And remember: "You can't win without a good crew and a good skipper, but with a great crew and a plumber, you can finish 5th in any race."