

## CORINTHIAN SPIRIT TAKES A DUNKING

Yacht racing used to be one of the 'grand old games'. A sport partaken by the few, decked out in white deck pants and blue blazers. Gin and tonics on the club porch. A proper sport for gentlemen.

Along the way the sport has lost most of these trappings. Cheeky young upstarts in patched blue jeans. Clubs formed not with Royal Patents but cast-off school portables. Cases of bottled beer sipped on rocky shores. Sailing has seen a real explosion of interest over the last decade, an explosion which is changing the face of the sport.

Only the most conservative would not agree that these changes have given the sport more visibility to the general population, and have greatly increased the level and quality of competition.

The speed with which these changes have taken place has had its drawbacks, however. As a proper sport, for proper gentlemen, new competitors used to learn that there were certain rules with which the sport was to have been played - a certain sense of 'fair play' and 'honour' which was almost more important than the sport itself - some refer to this as the 'Corinthian Spirit'.

Some would scoff at the notion of a Corinthian Spirit in such a competitive environment. Others, not having been introduced to the sport through clubs where such a notion holds sway may never have given a moment's thought to the matter.

Whatever the reason, the behaviour in almost every fleet and every class would indicate that there is need to re-examine each competitor's own sense of what is 'fair play' on the race course.

Some of the ungentlemanly behaviour is undoubtedly the result of things said - or done - in the heat of the moment. Surely retracing the illegitimacy of a fellow racer's canine ancestry in a manner so that half the fleet will be made aware of your opinion is not only without reward - but also completely unnecessary! If you feel that you have been wronged protest! Then let that body determine the merits of your case in a more reasoned way.

And, if you are involved in a protest please don't hang around the regatta desk spouting off at all and sundry about the stupidity and effrontery of the other party to the protest. Save your thoughts and verbiage for the Protest Room where it will serve you better.

Finally if you've run afoul of the rules (even through inadvertance), accept your penalty graciously and get on with the race. It used to be that a boat which fouled another was required to retire from the race. Not only the IYRU Rules but also personal honour dictated a gracious retirement. The rule-makers have decided that retirement may be too great a penalty for most infractions and have provided for alternative penalties such as the '720'

rule' or the '20% rule'. The intention was to allow competitors to acknowledge their infraction of the Rules without the necessity to retire. The alternative penalties were intended to encourage rule observance by relaxing the penalty.

Unfortunately, recent observations on the race course would indicate that many competitors blithely ignore their transgressions of the rules and sail on, just daring the aggrieved sailor to put the matter to protest. They are, seemingly, hoping that the protesting yacht will lose heart due to other commitments, or the hassle of going through a formal protest. Such action is not fair, either to the boat whose rights have been infringed, or to other competitors who have accepted their penalties on the water.

Perhaps some of the problem lies in poor comprehension of the Rules. To the uninitiated the Rules read like so much legalese - the fine print acknowledged to exist but never understood and rarely, if ever, read. Poorly organized and poorly presented the IYRU Rules are daunting to even the most enthusiastic of yachtsmen. To others, they are proof positive of Matthew Arnold's maxim that 'A little learning is a dangerous thing.' Poorly understood and rarely grasped in their entirety, the Rules are used by some to claim rights where none were ever intended to exist.

To alleviate this problem we strongly suggest two courses of action. First, buy a copy of Eric Twiname's 'The Rules Book'. This soft cover book is a classic example of organization. The rules are grouped in logical sections such as 'The Start'; 'The Upwind Leg'; 'Mark Round-ing'; etc. You can actually see how the rules work as a unity. Reading - and re-reading this text is an absolute must if you ever wish to develop a facility with the rules.

Secondly, Shackles and Cringles will commence publication of a regular column on the rules. We'll be printing articles, reprints of Appeals decisions, and we'll even undertake to answer your questions on the rules, with the help of experts. Watch for this regular feature in the next issue of Shackles and Cringles.

David Whitfield.  
Vice Commodore.

by RICHARD STORER.

14) Sail adjustments should be kept as simple as possible. It is necessary to have an adjustable clew outhaul. The adjustment for this should be kept up on the boom at the forward end where the crew can work it. The Cunningham control should be led out to either side with a clam cleat positioned in the area of the centre thwart so that the helmsman can adjust the Cunningham at will. A minimum of a two to one purchase should be used here. The vang, also, should be led out to either side of the centre thwart for the helmsman's adjustment. The use of high quality ball bearing blocks will repay you here in terms of reducing friction in the vang system and, therefore, in the purchase required. A minimum of eight to one power on the vang is necessary. Fit good quality aluminum cleats so that the sail controls may be highly loaded in heavy air with no worry about a) un-cleating or b) the cams (if you are using that variety of cleat) turning inside out.

15) Our mainsail, which has won every major Albacore Championship held, is designed to utilize two inches of pre bend in light conditions. The most uncomplicated and cheap pre bender is a three to one rope purchase fitted under the fore deck, one end tied to the mast and the other bolted to a pad eye up forward on, perhaps, the king plank or a double reinforced area on a glass boat, and then led back to a cleat under the aft edge of the fore deck, for an easy adjustment by the crew. Calibration should be marked on the top of the deck at the gate so that one may easily judge the position of the front side of the mast so that given settings can be reproduced.

16) One of the most changing items amongst Albacores in the last five years has been the main sheeting system, varying from an aft mounted traveller through a regular centre main sheet to the aft split bridle system used in conjunction with an extremely powerful (8 to 1) vang. The centre main sheet is very simple for heavy air sailing because of the degree of direct vertical control, in addition to the vang, which it affords you, plus the obvious advantages in boat handling. The drawback is simply that for light or medium conditions one always has to pull the traveller up to windward after a tack, in order to get the boom up on the centre line of the boat and maintain pointing ability. However, for light/medium conditions I would recommend the split bridle main sheet system utilizing a powerful vang, in order to maintain and adjust leech tension, the mainsheet purely acting as a traveller. Because of the very rapid adjustments of boom angle to the centre line that can be made using the split bridle system it is extremely good in light/medium conditions where the wind direction and velocity are constantly changing. In addition a split bridle means that every time you tack you do not have to adjust the traveller at all- you simply pull in the main sheet in order to get the boom up onto the centre line of the boat. It is for this reason that the English Albacore sailors have adopted

the centre hoop system, in conjunction with the same powerful vang system, in order to eliminate the bothersome traveller for short tacking situations. For North America, with its lighter wind conditions, the drawback to the centre hoop system is that unless the hoop is made tall enough so that the fall between boom and lower main sheet block is at a minimum the boom will tend to be slightly below the centre line, even in the lightest of conditions, so that those equipped with the system will not point as high as a split bridle rig boat, simply because of boom angle. As I mentioned, the boat handling advantages of the centre main sheet system, whether it be hoop or traveller, are ease of pumping plus the ability when jibing in heavy air for the helmsman to catch hold of all the parts of the main sheet and throw the boom across at the critical time, in a manner which is more controllable than the boom being passed across by the crew holding the vang. My personal preference and that of the majority of Albacore sailors is for the split bridle system.

20) Jib Sheetig System. It has been the norm for nearly five years now that with the style of jib we build and that has won so many championships, that the fairlead should be mounted as far inboard on the side tank as there is space to attach it (approximately 14" from the centre line of the boat). Plus, for most wind conditions, the fair lead should be located 8' 10" forward from the inside aft face of the transom. However, it is possible to obtain better pointing ability in winds below 8 miles an hour with the fair leads as close as 12" to the centre line of the boat by using an eight track system (a real crew killer) or, better still, the bar sheeting system. The bar sheeting system consists of an aluminum tube attached at either end to a plunger adjusted slider spanning the beam of the boat immediately below deck level located immediately behind the chain plate (average bar setting 19" behind the aft face of the mast, using our jib). The sliding fair leads are located athwartships on this bar and control line is rigged led out to each end of the bar to control the opposite and leeward slider, so that the sliding fair lead may range in adjustment from 12" from the centre line right out to the inside limits of the side deck. The angle of the jib lead to the centre line of the boat will of course vary with the size of the waves and the wind speed. The larger the wave and the fresher the wind the further out from the centre line the fair leads will have to be carried, in order to maintain best speed. When carrying the fair lead very close to the centre line of the boat it is extremely important that the jib leech is not over sheeted and that sufficient twist is allowed. The twist, together with the fore and aft placement of the fair leads enables you to utilize the clean exit of our jib design in the lower four feet of the leech so that there is a minimal amount of backwinding on the mainsail. Please note that if there is no backwinding of the mainsail (up to three

feet above the boom and up to nine inches back from the mast) then the fair leads are too far out from the centre line and/or there is too much twist in the jib.

19) Jib Luff Tension. Firstly, it is imperative that a jib tensioning device capable of adjustment while sailing is used. The best system is a multi purchase box attached to the end of the jib halyard. Basically in light air more sag is allowed in the luff of the jib, in order to produce a fuller and more powerful section (particularly useful for powering through a short chop) and as the wind increases in order to flatten the jib the jib luff is tightened to maintain pointing. A jib Cunningham is useful to only a limited degree when the adjustment is at the bottom of the sail - of course adjustment from the tack is much easier than mechanically arranging an adjustment from the head of the jib, although nothing like as effective.

20) It is important to realise that this business of jib luff sag and therefore control of the set of the sail is the major key to understanding why one should have a slack rig for a light wind with a chop and a tight rig for heavy air and long waves or flat water. Clearly if one has an unusually light crew weight then easing the jib halyard in extreme conditions will enable the mast to bend and feather off the whole rig more quickly and because you are able to keep the boat on its feet and driving then you will stand some chance of, at least, maintaining contact with the heavier crews upwind in a breeze in large waves. Whilst dealing with rig tension it is very important to understand that an Albacore in terms of hiking power is a very tough boat for a light crew to sail. On a trapeze assisted boat there is any amount of hiking power available to drive the boat upwind. However, on the Albacore there is relatively little hiking power (ideal crew weight 320 pounds to 370 pounds to keep the boat upright). As such, unless one is very heavy it does not pay to carry the rig too tight in pressure conditions. An additional and critical factor is that because of very fat forward sections of the under water shape the Albacore tends to pound badly on waves and a slack rig enables the rig to pant and act as somewhat of a shock absorber when sailing into a short chop and so to a significant degree assist the hull in not being thrown around as much.

.....to be concluded.....

REMINDER--- THE TORONTO BOAT SHOW

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## WHY NOT WAIVE THE RULES!.....

What are rules, after all? They are not meant for me, they're for old incompetants, grey-haired school masters and sea lawyers. If other sailors can't get out of my way that's their lookout. I'm out for a fast exciting race and I'm not letting anyone past without a fight.

Well that's one attitude for sure and its one which is shared by many protaganists of professional body contact sports. Why should sailing be in a different category? It is partly to do with tradition and partly to do with common sense. Traditionally sailing was a gentleman's sport and the physical contact was relegated to the paid crew, leaving the gentleman's mind free for the loftier matters of strategy. All the most ingenious strategies, in games of every sort, are used to get around constraints forced on the competitors in the form of rules. Anyone can win by flouting the rules but it takes cunning to use the rules to win a game. Rules, then, are a necessary part of any competitive sport. In sailing there is a more practical aspect. The rules have been formulated to keep competing boats apart. A collision between two boats means that one of them has broken the rules and should retire or accept a penalty. Not only is it unsporting to deliberately ignore rules it is dangerous and expensive. A class which is noted for racing damage, however caused, will be much more difficult to insure than one in which such damage is slight. The danger is obvious to anyone left with a holed boat two miles from shore in a thirty knot breeze.

This simplistic view of the rules is very useful; to a novice they can be daunting. In practice a good maxim is to keep clear of trouble; avoid contact like the plague. Right or wrong, contact slows a boat down. In the limit a sinking right boat is as much a loser as a floating wrong one. After more experience one can begin to insist on one's rights but only in cases where there is no possibility of doubt. The expert championship contender may well care to push his luck in a last desperate effort to win a series, but even then fairness is the essence and the risks involved must be carefully weighed before any aggressive action.

Generally at the front of the fleet rules are well observed, this is more because fleets are thin at the front end than that the top sailors know the rules backwards. In the middle of the fleet are the masses and the danger. It is quite difficult to break out of the normal regatta pack and this leads to frustration and lack of concentration, which in turn causes many accidental rule infringements.

Why waive the rules? Why indeed. The rules are part of sailing, part of the fun and they are essential to the competition. Use them to their limit, if you can, but never abuse them, for to do so takes the whole point out of racing a sail boat.

Graham Rogers.

## NRC ALBACORE PLUG DISCUSSED.

A while ago the magazine 'Science Dimension' carried an article, by Joan Powers Rickerd, about the Albacore plug produced by the National Research Council. It is reproduced below.

Boats - almost as old as man himself - were one of the earliest modes of transportation, and the sail, one of man's first inventions, has been the prime means of propelling them for most of maritime history. However, as sail gave way to steam in the latter part of the 19th Century, sailboats found a growing role in recreation. Today, thousands of sailboats, mostly small craft designed for coastal and inland waters, are being constructed throughout the world in a variety of types and different materials.

Since Canada has more than 131,000 nautical miles of coastline on three oceans, two of the world's longest rivers and nine of the world's principal lakes (to say nothing of the thousands of smaller ones), the country requires an extensive marine transportation system. Over the years, a strong research and development capability in hydrodynamics has grown up and national facilities are now at the disposal of industry and government. These are housed in the National Research Council's Marine Dynamics and Ship Laboratory where, for almost four decades, researchers have been active in a wide range of hydrodynamic research and testing.

During this time, a number of sophisticated techniques have been developed which have permitted measurement of the full-scale properties of such craft as fishing boats, car ferries, destroyer escorts, survey ships, bulk carriers, yachts and hydrofoils. Now, in co-operation with the Division of Physics, a new dimension has been added.

One of the fastest growing areas in the field of sailing is that of one-design class boats. All boats in a one-design class are built to the same specifications in length, beam, sail area, etc. Racing is usually between identical craft, or different boats that have been previously measured and corresponding handicap ratings calculated. In the case of identical craft, boats must be within certain specified tolerances from a standard set of lines defining hull shape, and in the latter, hull measurements must be accurately determined. Conventional methods of achieving these objectives include the use of templates and the establishing of data planes from which selected measurements may be made. But templates are flexible and unwieldy and datum planes are difficult to set up with complete accuracy. For instance, one measuring may show that a boat is within the allowed tolerances, while another may show the same hull to be outside specified limits, incurring considerable expense to the owner and builder in rectifying the situation.

Such was the case when the Canadian Albacore Association, which administers the Albacore - a one-design 15 foot sailboat in Canada - asked the Laboratory if an improved method of measuring hulls and comparing them with standard lines could be developed. Boats imported from the United Kingdom, nominally built to the same lines, at a price two-thirds higher than those made in Canada, were proving faster on the race course, and as a result, Canadian sales were deteriorating.

Rather than advise on measuring particular areas in a particular way, David Murdey and his colleague Drasko Gospodnetic had another idea. What about photogrammetry? Since NRC's Division of Physics has been increasingly widening this area from the traditional fields of mapping and surveying it could be the answer here. An Albacore was made available to them by Skene Boats Limited of Ottawa, and they approached the Photogrammetry Research Section of the Division.

"How do you define the shape of this boat," they asked Marius van Wijk? "Oh, it's easy - no problem at all - we'll just take photographs," he said. A total of 200 points (or crosses) were marked on the hull to be used as control reference points. Since close range was necessary in order to obtain the required accuracy, and the boat was too large to be covered on one photograph, several overlapping photographs would be needed to make up the whole. These would then be measured analytically in a stereocomparator.

The Marine Dynamics and Ship Laboratory then obtained a set of Albacore lines from the Canadian Albacore Association and fed them in to their standard computer system for making ship models. "This enabled us," explains David Murdey, "to get within the computer direct comparisons between the lines and the real Albacore at the point on the hull where the crosses were put for the photogrammetric measurement. From this we determined that the hull actually had more curvature in the profile than the lines called for. Furthermore, the port and starboard sides of the hull were not identical.

These discoveries led the Laboratory into another aspect of the operation. The hull measured had been manufactured from an existing standard plug (the form which is the basis for the manufacturing process), and it was inferred that all boats made from the same plug would show the same characteristics. The Association again asked for help, this time to manufacture a new plug.

"We knew that we could build a plug that was exactly to the lines, which would mean that the builders could build a boat which was just as good as the imported model; so we undertook the job," says David Murdey. "Using lines which we put into our computer system - our standard method of making models - we obtained an accurate, smooth representation which was precisely symmetrical. Skene Boats Limited assisted

us with some details - there were places on the hull, for instance, which were not completely defined, where builders had a certain degree of choice - and we incorporated their practical suggestions."

Because of limitations in the size of models that could be accommodated in the Laboratory's milling machine, the plug was made in four parts and these were joined after the milling was completed. Skene finished the plug to a high degree of gloss (it had only been finished in the Laboratory so that it would not absorb moisture). On seeing the first boat and the standard of finish, American dealers ordered 21 boats. The company sold 30 at the Toronto Boat Show last January and another 40 have subsequently been delivered.

"The high quality product that has been achieved with NCR expertise has been a definite boon to Canadian business," says Carl Strike, President of Skene. "Not only are we heavily exporting the Albacore, but our other lines have picked up as well."

Although this is the first time photogrammetry has been used by the Photogrammetry Research Section to determine the shape of a boat, "should there be an interest from the industry, we certainly would be interested in expanding this field," says Marius van Wijk. "The main advantages are, of course, that it takes less time than the mechanical method, less field work is required, and the boat is 'tied up' for a much shorter period. It all fits in with our work in the field of plotting."

Concludes David Murdey: "Acting as catalyst, the Council was able to provide the knowledge and the know-how which enabled one builder to reverse a declining pattern of sales with a more satisfactory product. In addition, it has encouraged the consumer to 'buy Canadian!'"

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2nd Canadians 1980

1979 Results

North Americans	3rd
Canadians	5th
Lake of Bays Open	1st
L.S.S.A.	1st, 3rd
Hamilton Invitational	1st
RHYC Turkey Regatta	1st

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## REGATTA NEWS AND RESULTS

### PABAR 1980

Good winds, close racing and very generous hospitality went together to make the 1980 PABAR memorable to all who sailed it. At the heart of the 30,000 Islands region of Georgian Bay, in a beautiful setting, is an area of relatively open water crying out for a regatta. PABAR is first and foremost an enjoyable occasion and, while the racing is taken seriously, it is enough to take part for many. It was especially good to see the junior and sailing camp boats out with their crews obviously enjoying the racing, and learning fast, too.

Consistency paid off for the winners of the regatta. They were beaten in two of the races by the Fosters, who had a bad third race and, since all three races counted, they had to be content with second place overall. The islands surrounding the racing area caused geographical wind bends, which favoured the starboard side of the course in almost every instance. Although the wind changed gradually as the lake breeze filled in throughout the day, there was no completely unpredictable windshift.

The courses and lines were very professionally set (not surprising, with Paul Phelan as the Race Officer) and, in spite of the wide range of experience of the competitors, no major incidents caused the never ending round of protests common at some of the other regattas.

PABAR is a unique Canadian sailing experience and your correspondent enjoyed every minute of it, from the eight mile tow by powerboat, with the Albacore planing behind (happy to be without the incumbrance of her helmsman), the racing and the pic-nic lunch on a nearby island, made available by one of the competitors, to the fun banquet and prize presentation. Not to mention the debut at windsurfing - yes the water was warm! It was sad to have to leave but if we behave ourselves perhaps they will ask us again.

Graham Rogers.

### NATIONAL TEAM RACING CHAMPIONSHIPS.

The Royal Canadian Yacht Club Little Scorpions won the 1980 Canadian Albacore team racing championship in an event marred by poor attendance and bizarre weather.

Only three three-boat teams showed up to compete for the Safrata Trophy, two from the RCYC and one from South Muskoka Sailing Club. A three race round-robin series was scheduled for the Thursday afternoon and Friday morning before the Canadians at Cleveland's House in September.

The Little Scorpions beat the RCYC Imperial Poonahs in the first race, a gusty 20-30 knot survival contest that left little opportunity for the close-covering tactics of team racing. After watching most competitors dump repeatedly the race committee, chaired by Dennis Sherwood, postponed the second race.

Friday morning brought conditions opposite to Thursday afternoon's - extremely light and patchy. Again teams found it difficult to employ team racing tactics as it was a struggle just to keep moving. South Muskoka won both races on the water against the RCYC teams but lost one of them in the protest room to the Little Scorpions. The successful protest gave the Scorpions a 2-0 record and the championship.

Members of the Scorpions were: team captain Leon Safrata and crew Jane Dragone, Ian Bates and Rob Martin, Tam Matthews and Jeff Zimmerman.

Team racing is very popular in England - where there are organized leagues - and other European countries but has not caught on to any great extent in Canada. This neglect is unfortunate because team racing offers some benefits unavailable in individual racing, such as:

- \* it teaches the rules since they are used to hold back opponents;
- \* it teaches boat handling skills since there is a lot more tacking and gybing than in individual racing;
- \* it offers several short races in one day;
- \* it offers a variety of courses, not just the same old triangle;
- \* it de-emphasizes pure boat speed and the technological arms race.

Since the RCYC is the hotbed of enthusiasm in team racing, the club Albacore fleet plans to issue a series of challenges to Toronto area clubs during the summer, hoping to increase interest in the sport and get some more competition for the 1981 championships.

Rob Martin.