

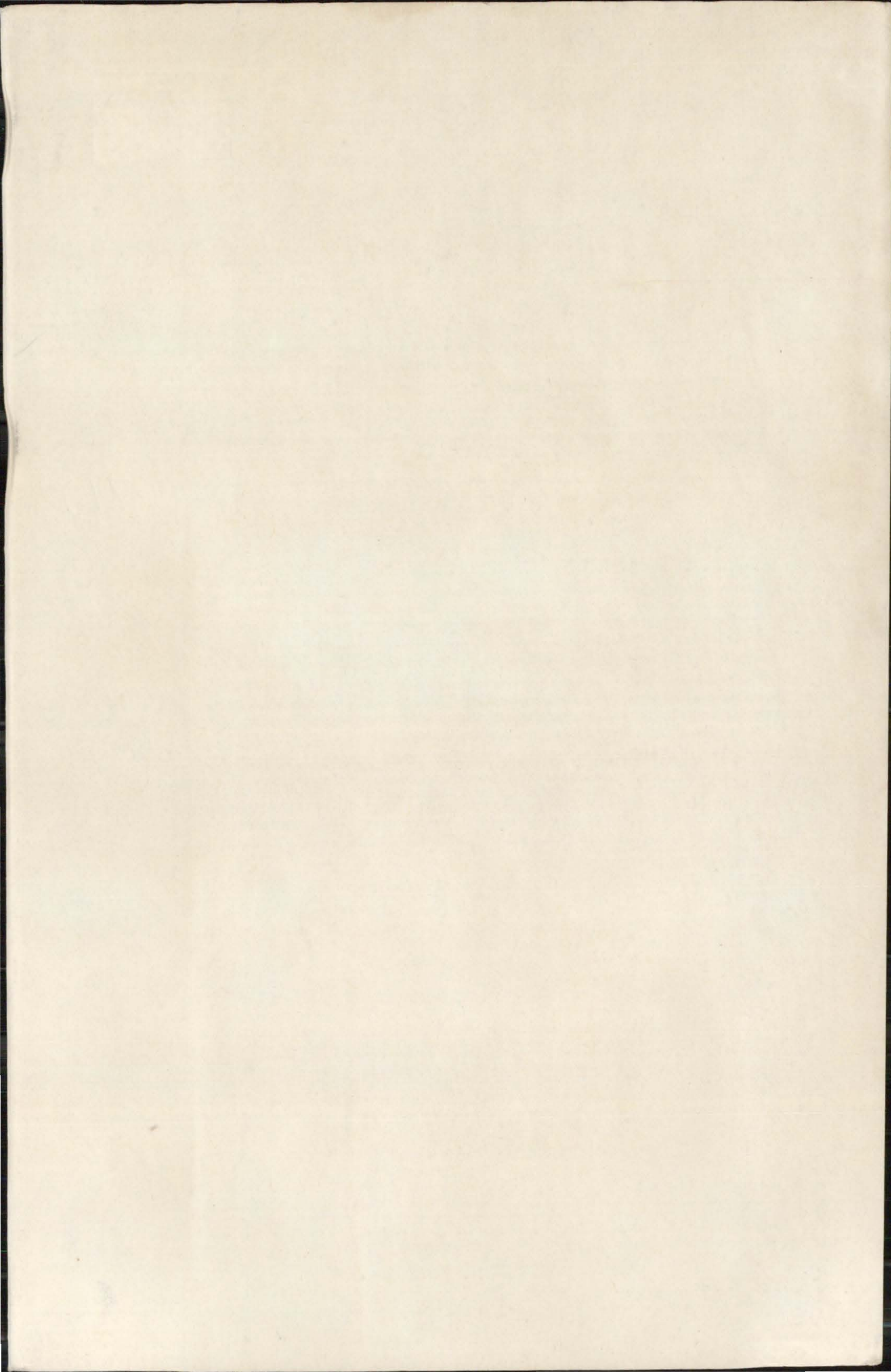
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The Single-handed Trans Atlantic Races

71



A.Y.R.S. Publication



THE SINGLE-HANDED TRANS ATLANTIC RACES

Published by
THE AMATEUR YACHT
RESEARCH SOCIETY
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(Founded June, 1955 to encourage Amateur and Individual Yacht Research)

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Kent,
England.

Dear Sirs,

1. Please enrol me in the AYRS. \$5 or £2 is enclosed.

2. Please enrol our Yacht Club in "Associate Membership" of the AYRS. \$25 or £10 is enclosed, for which we understand that 5 copies of each of the AYRS publications will be sent as they come out, and our members may attend AYRS meetings in London or any centre, the room hire being paid for by a collection.

3. Please send leaflets of the AYRS to the name and address below.

*Delete whichever item is not applicable.

Name..... (Block capitals please)

Address

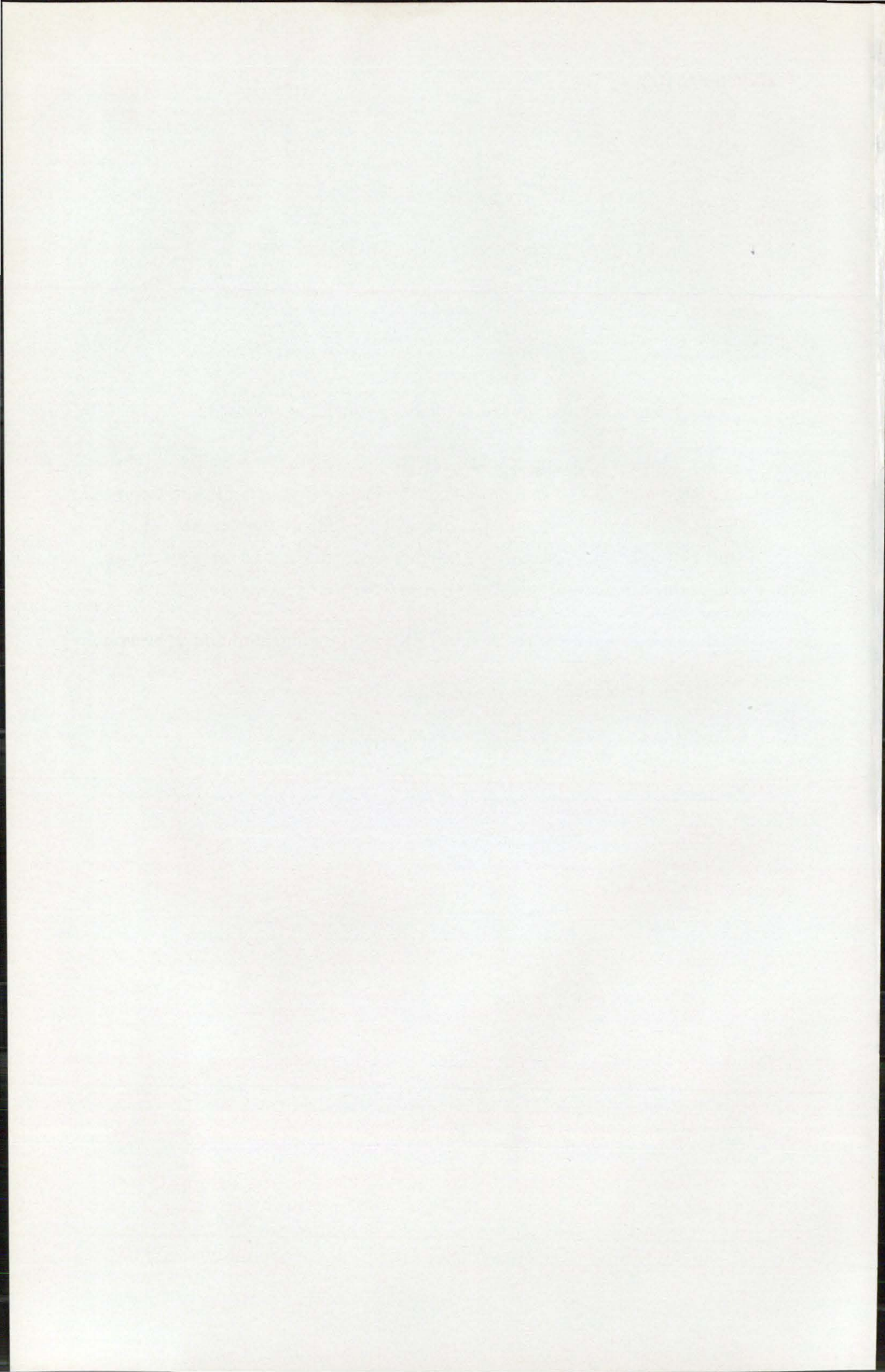
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Signed.....



The AYRS Director

The AYRS Committee has appointed Michael Ellison to be the AYRS Director, as a full time job.

During the last 8 years, Hetty Tett, with some paid assistance in the last year, has been dealing with the vast amount of work which comes into Wood-acres with the greatest of efficiency. Having now come to a stage where we cannot take on any more work here, we felt that it is far better to remove all the routine dealing with subscriptions and orders for publications at this moment, rather than waiting until the system broke down from sheer increase of work.

Hetty took over the business side of the AYRS from me when the membership was some 400 and has built it up to the present 2,000 by very hard work. Essentially, Hetty's method is to deal with all incoming mail by return of post, as you all know. Sometimes, this is not so easy as with illegible signatures, absence of addresses (or both) but, by some mystical juggling with various card indexes, or even recognising handwriting, the person is found.

Our mail is quite amazing. We get letters on absolutely everything to do with yachts from people all over the world. Each post, however, seems to contain one or two letters with a real secretarial problem as well as yachting ones.

But the AYRS work is far more than merely replying to letters. The weekly accounts must be sent off. Unpaid subscriptions have to be "chased." Invoices and statements of account have to be prepared for the booksellers who take our publications. The Boat Show "Rota" has to be prepared. Notices of Meetings have to be sent out. Committee Meetings have to be attended. My letters to members have to be written. The work is far from simple and Hetty takes it all in her stride.

Hetty has "mothered" the AYRS all these years. Without her, we could not have survived and expanded to our present stage. We all owe her a great debt for her generous, unstinted helpfulness.

Hetty will miss the interesting work she has been doing. She will also miss the charming letters you have been sending in. We hope that she can find as much pleasure and satisfaction in preparing our future publications, as Assistant Editor, as she has had from her AYRS work in the past.

Michael Ellison

I can think of no one better suited to the post of AYRS Director than Michael Ellison. A Master Mariner with 10 years experience of "Deep Sea" merchant vessels, he sailed in the 1964 OSTAR and the 1966 Round Britain Race. For the last 6 years, he has been working in the family firm which sells agricultural machinery. He thus combines a love of the sea with short-handed yachting experience of both single and multihull yachts. He has business experience at the executive level, too, which is primarily the quality we need for our Director. He is taking over a rather complicated organis-

ation and will need as much help as we all can give him. With his appointment, we can press for new members to the utmost—we really need to double our present membership to be a permanency on the yachting scene without increasing the annual subscription.

Increasing the Membership

Since the AYRS began, we have tried in every way we have seen to increase the membership. Advertisements in the yachting magazines, the Boat Shows and other methods have been used, with only limited success. The membership has increased slowly and continuously. Only one spurt of membership has ever occurred and that was when we asked members to talk about us at their yacht clubs and enrol their friends.

We may conclude from our experience that the AYRS has always expanded and will always do so by the personal recommendation of our members. We therefore again ask you to talk about us at your yacht clubs and enrol your friends. Ever since the AYRS began, we have sent sample publications to people in the hope that they will join. This appears to have little or no effect. For instance, a recent trial of this method with 15 people got us only one member.

The line to take with people is twofold, we suggest, as follows:

- 1 Mention what we have already accomplished.
- 2 Talk about the projects we have “in the pipeline.”

Our Members Have Done the Following:

- 1 Perfected self-steering gears for yachts. Mention our book on the subject.
- 2 Modernised the catamaran and developed it into a racing machine.
- 3 Modernised the Trimaran and Proa.
- 4 Studied the expertise of Ocean Cruising and yacht equipment, yacht electrics, ventilation etc.

“In the Pipeline”

- 1 The flying hydrofoil with speeds of 30 knots.
- 2 Yachts pulled to windward by a free-flying kite.
- 3 A square rig which is more efficient than the present sloop.
- 4 Studies of yachting accidents in both single-hulled and multihulled boats.
- 5 The “Sailing bicycle” or two-runner ice-boat.
- 6 Hydrofoils to stabilize the single-hulled yacht and make it sail upright.

For conventionally minded yachtsmen we have the following:

- 1 It is our intention eventually to produce a series of single hull designs which will have the greatest speeds possible “all round the clock.”
- 2 We will eventually produce a sail rig which will avoid *all* the inefficiencies of the present sloop rig.

We feel that with the above briefing, our very loyal members will soon get us the membership we need.

Tear Out Leaf

Page 3 of each future publication can be used to enrol new members and yacht clubs.

THE OBSERVER SINGLE-HANDED TRANSATLANTIC RACE (OSTAR FOR SHORT)

by John Morwood

This yacht race has been called "The Greatest Race in the World." One can hardly call the Sunday Times "Round the World Race" or the "Golden Globe" a race as such. When competitors start at such widely spaced intervals, the essential ingredients of a "race" hardly exist, even though the newspapers have done their best to make it one.

The Course

The OSTAR consists of a voyage from Plymouth, England to Newport, Rhode Island in the United States, though the first OSTAR finished at the Ambrose Light, off New York. Only one person is aboard each yacht and the major trophy is awarded to the first yacht in, irrespective of size. There are no rating rules for this trophy, though a handicap trophy was given in 1964 and 1968 (based on the rating) in addition to the major award.

The Objects of the race

As will be seen later, the object of the first race was a trial of endurance of man and yacht by individuals. The "Race" appears to have been of rather secondary importance.

Now, however, the OSTAR has taken on the job of testing yachts and gadgets in the deep sea—the ultimate test of any boat. There is the added advantage that, as no rating rules whatever are applied to the yachts, they will only be shaped to suit the sea rather than to get the best out of a particular "Rule." The rating rules which have been used by the "Inshore" and "Offshore" racing yachts in the past and present deform the modern yacht and hold back valuable improvements. At least this does not happen in the OSTAR.

Self steering

What really started the OSTAR was Blondie Hasler's interest in self steering gears for yachts. The AYRS is an authority on methods and gears for making a yacht steer herself at sea, a study which was started in 1957, before the first OSTAR took place. Our book on the subject covers all known methods from those of Joshua Slocum, through Otway Waller's twin spinnakers with Frits Fenger's modifications, Marin Marie's thoughts, right down to the Gunning gear. We have even invented gears which are simpler and cheaper than any of the commercial gears now on the market. One of our members, Bernard Rhodes, is at present sailing around the World. His 22 ft trimaran has had several gears since she left England where Bernard built her but now sports a horizontally pivoted vane which has lines running through blocks to the tiller. He finds this to be the best gear that he has used so far.

The events leading up to the OSTAR

1. Michael Henderson must be given the credit for re-introducing self-steering gear to yachting. He took to yacht designing just after he left the Merchant Navy at the end of the 1939-1945 war and developed a special interest in the newly formed Junior Offshore Group (JOG) of the Royal Ocean Racing Club. His first successful design to The JOG Class was *MICK THE MILLER*. Being a new class, there was a good deal of experimentation in design which the Class Committee encouraged, so, when Henderson sailed in the JOG races with a self steering gear of his own design, it was not promptly banned. This would undoubtedly have been its fate in any established class.



Mick the Millar with her self steering gear in use. (Photo: Beken, Cowes)

Thus *MICK THE MILLER* sailed through the whole 1954 season with a self-steering gear. Michael Henderson showed that the gear could keep the boat sailing in light winds at night in near calms when others drifted. Also, even if other boats were sailing, when morning came *MICK THE MILLER* would be well to windward of them. He saw that the boat wriggled its way to windward, following small wind shifts, thus giving him an advantage.

2. In 1955, Ian Major wanted to sail across the Atlantic in his twin bilge keel yacht *BUTTERCUP*. For this passage, he devised a type of self-steering gear acting on a trim-tab on the rudder with a mechanism which he calls a "differential" to avoid oversteer. This belongs to the technicalities of self-steering.

3. During the 1950's, and presumably long before that, "Blondie" Hasler had been thinking about ocean cruising yachts. His aim was to devise a yacht which would be as comfortable and safe as could be produced and, essentially, easy to work.

On the basis of a "Folkboat" hull, he built a highly rounded deck to give internal headroom with hatches to give him access to the outside where necessary. The main steering position was just aft of amidships where a hole allowed his head to come out. A small spray-hood over this hole helped to keep him dry. Hatches in the side served two purposes, they allowed him to have air when it was hot and also to get into the boat.

"Blondie" at first experimented with the Ljungstrom rig. This rig has no jib. Two main sails are set which are side by side when beating or reaching but they can separate when running, giving double the sail area. The sails can be reefed to any amount by rotating the mast, thus winding up the cloth as in a roller window blind. The rig, as devised by Ljungstrom had no boom. "Blondie" devised a double boom arrangement for extra efficiency. The whole rig worked but by now had become too complicated and really a little unseaworthy.

Finally to our surprise, when "Blondie's" boat *JESTER* appeared for the first OSTAR, it had a Chinese junk rig and a self steering gear derived from that of Ian Major.

The origins of OSTAR

In 1956, Blondie, having altered his boat *JESTER* to his satisfaction, thought up the single-handed race across the Atlantic from east to west, i.e. normally to windward.

The idea was slow to take on. Letters to the yachting magazines produced no competitors at first. Then he teamed up with Francis Chichester and they agreed to race across the Atlantic for a personal bet of half a crown.

But eventually Blondie succeeded. With an immense amount of letter writing to very many people, he finally managed to get Lt. Col. Odling-Smee of the Royal Western Yacht Club of England to persuade the Club to organize the Race; the Observer newspaper would finance it and give the prizes.

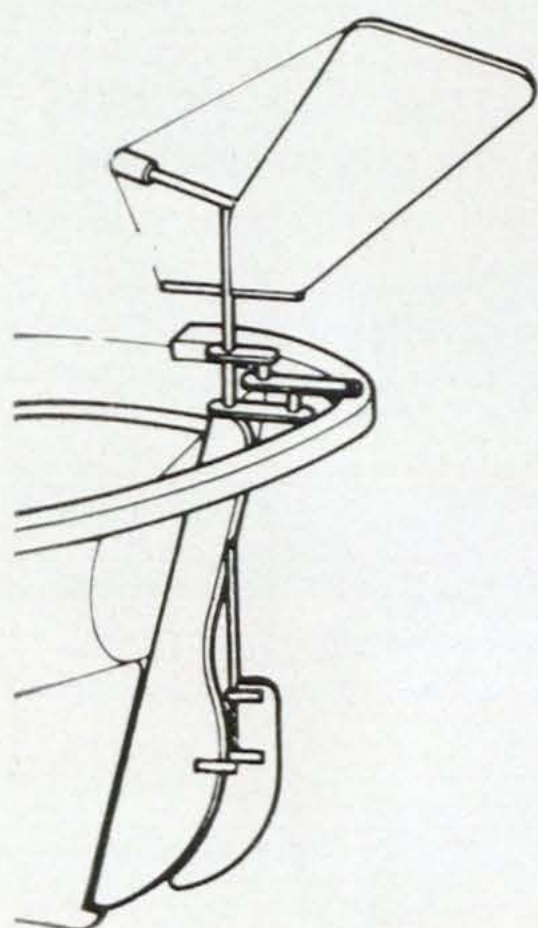
For the first OSTAR, in 1960, Blondie approached the SLOCUM SOCIETY named after Joshua Slocum—the greatest single-hander of all time—and they got the Sheeps Head Bay Yacht Club to control the finish—off Ambrose Light,

New York. The two subsequent OSTARs, in 1964 and 1968 finished at Newport, Rhode Island which could accommodate the yachts better. This also had the advantage that the yachts could avoid the steamer hazard off New York. The New York Yacht Club and the Ida Lewis Yacht Club of Newport now control the finish.

The 1960 OSTAR

There were finally five starters for the first OSTAR. They were:—

1 Blondie Hasler sailing *JESTER* (Folkboat). L.O.A. 26 ft.



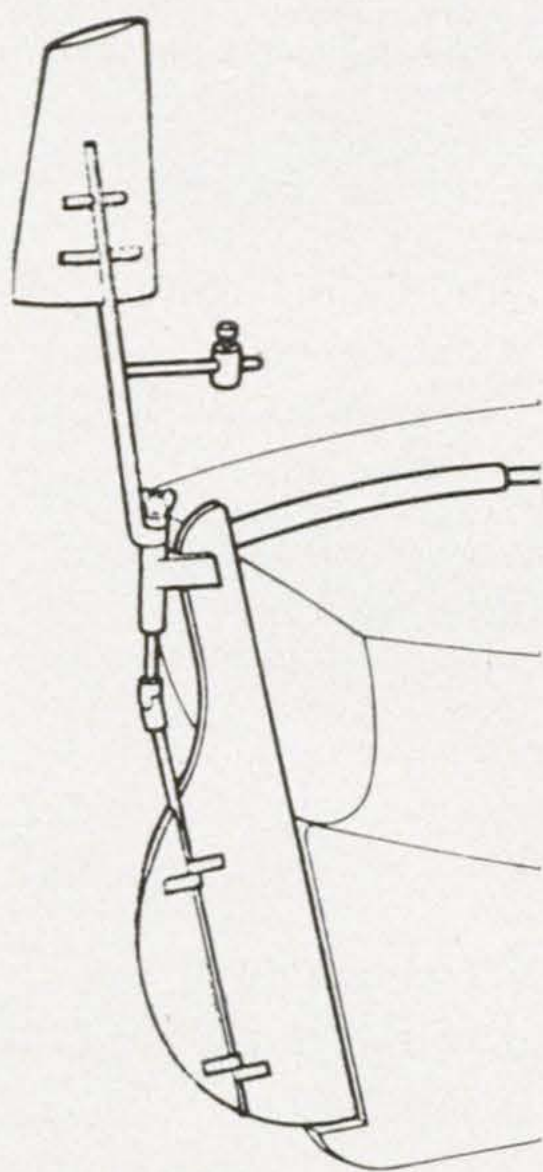
Jester, "Blondie" Hasler's entry with its adaptation of the Chinese lug-sail, had a wind vane that operated a large trim tab on the after edge of the main rudder. 1960.

(Photo: Eileen Ramsay)

- 2 Francis Chichester sailing *GYPSY MOTH III*. L.O.A. 39 ft 7 in.
- 3 Valentine Howells sailing *EIRA* (Vertue Class). L.O.A. 25 ft 3 in.
- 4 David Lewis sailing *CARDINAL VERTUE* (Vertue Class). L.O.A. 25 ft 3 in.
- 5 Jean Lacombe sailing *CAP HORN*. L.O.A. 21 ft.

They finished in this order:—

- 1st Francis Chichester, 40 days, 11 hours and 30 minutes.
- 2nd Blondie Hasler, 48 days.
- 3rd David Lewis, 56 days which included 2 days just after the start when he broke his mast and had it repaired at Mashford's yard at Cremyll, near Plymouth.
- 4th Val Howells, 63 days which included 8 days spent in Bermuda for repairs.
- 5th Jean Lacombe, 69 days. Actually, Jean started 5 days late so his official time is given as 74 days.



Dr. Lewis's single handed Transatlantic entry *Cardinal Vertue* had a vane operated trim tab that was really a part of the main rudder. 1960. (Photo: Eileen Ramsay)



*Howell's transatlantic entry also had a wind vane operating an auxiliary rudder in 1960.
(Photo: Eileen Ramsay)*

The yachts

All the yachts were single hulled. In those days, the multihull had only just come on the yachting scene. Arthur Piver, the trimaran pioneer in fact actually sailed across the Atlantic to take part in the race in his *NIMBLE* (L.O.A. 30 ft) but did not arrive in time for the start.

The selection of the Vertue Class by two of the entrants may perhaps have been due to the well-described Atlantic crossing by Humphrey Barton in *VERTUE XXXV*, in 1950 and his book *ATLANTIC ADVENTURES* published in 1952 by Adlard Coles.

The rigs

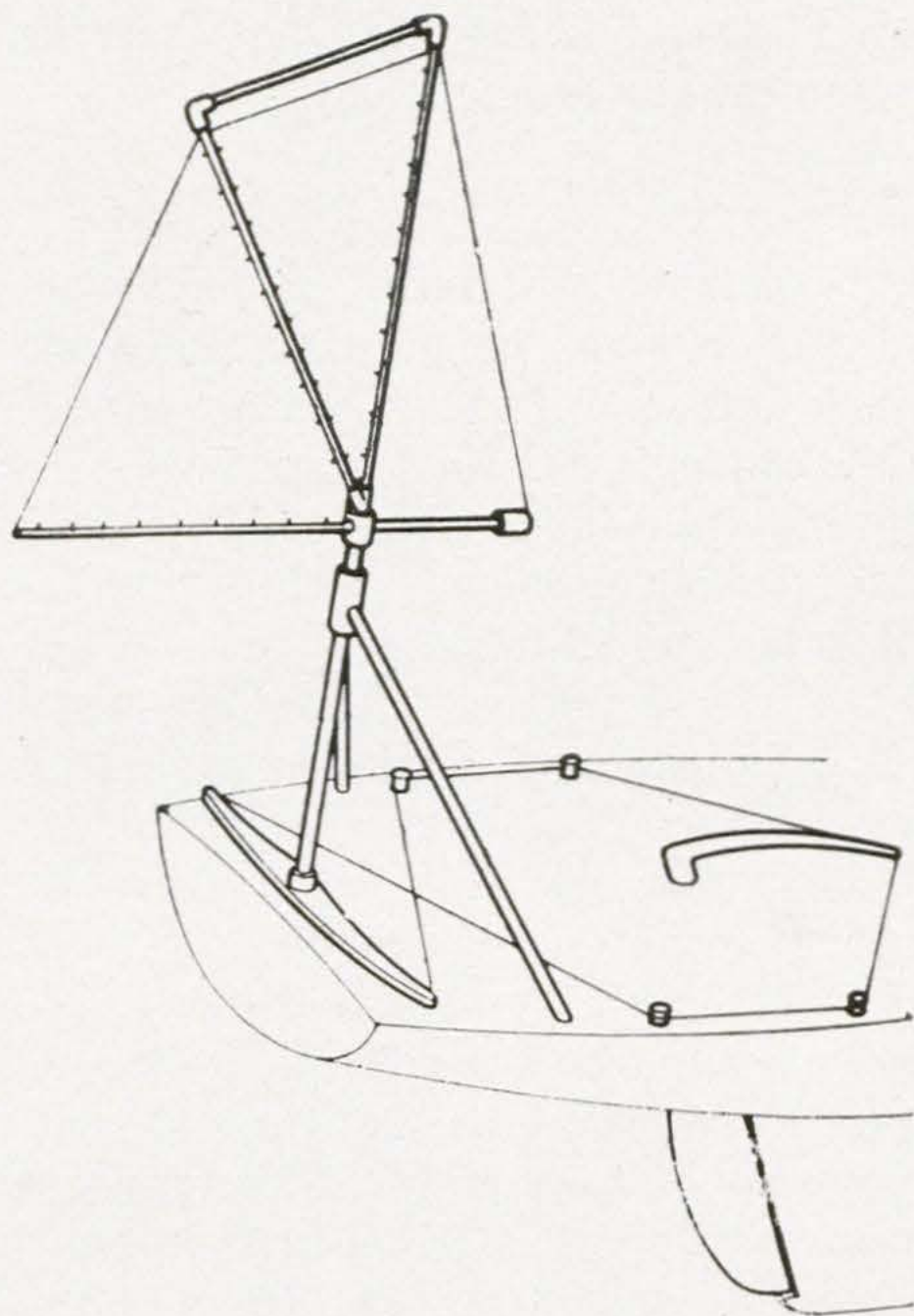
All boats were sloop rigged except for Blondie Hasler's Chinese Junk rig. Francis Chichester's *GYPSY MOTH III* was not altered to cutter rig until just before her passage in 1962.

The self steering gears

1. Francis Chichester, having studied the self steering gears used on model yachts, used a small sail like a mizzen whose boom worked the tiller through lines. He called it *Miranda* and found that it steered his boat at most times but needed a lot of attention.

2. Blondie Hasler's *JESTER* used a small plywood vane acting on a trim-tab on his rudder, using the "differential" system, mentioned previously.
3. Val Howells used a vane acting upon an auxiliary rudder.
4. David Lewis used a vane working a trim-tab on his main rudder.
5. Jean Lacombe had a rather sophisticated gear made for him by M.N.O.P. in France where the vane had a gearing down arrangement to a trim-tab on the main rudder.

All these gears worked. Some worked well. Some were only of intermittent value. *JESTER'S* gear worked well all the way across and encouraged Blondie to continue with self-steering gear development. They and many others, are described in the AYRS book *SELF STEERING*.



Here's how Francis Chichester's wind vane was linked to and operated the main rudder's tiller

The routes across

There are five main ways to cross the Atlantic from east to west.

1. The Northern Route. This is the route taken by the Vikings via Iceland, Greenland and Labrador, to "Vinland." Being far enough north often gives following winds because one is in the sector of the Atlantic "depressions" where easterly winds occur. The drawbacks to this route are the fogs and icebergs and the greater distance to go (about 3,400 sea miles). *JESTER* took this route.

2. The "Great Circle" Route. This is the shortest route of 3,000 sea miles and it was taken by Francis Chichester. His winning of the 1960 OSTAR, his 1962 crossing and the experience of the 1964 and 1968 OSTARs seem to show that it is the fastest way across.

3. The Transatlantic Liner Route. This lies further south and is placed to avoid icebergs. It is the shortest safe route and is 3,400 sea miles. Apart from other difficulties, it is laid so that one would have to sail against the Gulf Stream for the last 1,000 miles which runs at from 10 to 40 miles a day, there is also the problem of blustery winds.

4. The Low Powered Steamer Route. This is further south than the "Great Circle" route and has the advantage of warmer weather and less strong winds. This adds 550 sea miles to the "Great circle" course and goes near the Azores and Bermuda.

5. The Southern Routes by the Trade Winds. This route is warm, pleasant and with following winds but is nearly 2,500 sea miles longer. Experience has never shown it to be an OSTAR winning route.

Val Howells and Jean Lacombe took southerly routes, Hasler took the northern route while Chichester and David Lewis took the Great Circle with Chichester keeping slightly south towards Route 3.

Summary of the 1960 OSTAR

Five small yachts set off across the Atlantic that June. Nobody knew if they would arrive. A small crowd of us stood on the Hoe and quays of Plymouth Harbour watching the first four set off. Most of the sightseers at Plymouth did not even know that such an epic race was taking place. Those who did, watched the yachts disappear in the distance with wonder at the hardships which these men were voluntarily taking on and with their best wishes for the sailors' success. The OSTAR organisers all felt a great sense of burden of the responsibility for the safety of these sailors. However, they were also the organisers of the Fastnet Ocean Race of 640 miles and had faith in the ability of the small yachts to survive.

In the event, all five arrived successfully as did 14 of the 15 starters in the 1964 OSTAR and, though only 19 of the 25 starters in the 1968 OSTAR arrived in America, there was no loss of life. This does not mean that the Atlantic is a safe ocean to cross from east to west but it seems to show that a well-found yacht can survive more than perhaps we thought and that the chance of being run down by a motor vessel is not great. Structurally weak yachts, however, will inevitably place their crews in the greatest jeopardy.

Afterwards Francis Chichester wrote *ALONE ACROSS THE ATLANTIC* published by George Allen and Unwin, and David Lewis wrote *MY SHIP WOULD NOT TRAVEL DUE WEST*, published by Temple Press. Both these books give important information for future passages.

THE FIRST RACE-1960

by Mike Ellison

Before the race started, years of research and organisation with problems and frustration galore were spent by Col. H. G. Hasler and Sir Francis Chichester.

To show part of this work, here is how I followed their progress after first noticing a short announcement of the intention to hold a race across the

Atlantic while on a visit to New Zealand. I wrote to the address given which was the Slocum Society at New York and received a prompt reply from the American Embassy at Lima, Peru. That was in 1958 and 1959. The proposed rules are not now available. The revised rules are as follows:—

ROYAL WESTERN YACHT CLUB OF ENGLAND

First Single Handed Trans Atlantic Race 1960

Rules and Conditions of Entry

(Preliminary)

Organisation

1. The Royal Western Yacht Club of England (The Hoe, Plymouth. Tel.: Plymouth 60077) will act as organising Club, will deal with all entries and will Start the race.

The Slocum Society have very kindly agreed to be responsible for the finishing arrangements.

Object

2. The race is intended to be a sporting event, and to encourage the development of suitable boats, gear, supplies and technique for single-handed ocean crossings under sail.

Awards

3. A trophy will be presented by the Organisers to the competitor adjudged to be the winner, to be retained by him as his permanent possession. Other subsidiary trophies will be presented, as decided by the Organisers.

Date

4. The start will be from Plymouth, England, at 10.00 a.m. B.S.T. on Saturday, June 11th, 1960.

Course

5. By any route to the finishing line off Ambrose Light Vessel, in the approaches to New York Harbour. Great circle distances are approximately as follows:—Total distance 3,000 nautical miles; minimum ocean crossing (Ireland to Newfoundland) 1,700 nautical miles.

Entries

6. An entry will consist of a sailing boat (hereafter called "the yacht") plus a named crew of one person only ("the crew"). The crew must be over 21 years of age, but need not be the owner of the yacht, and may be man or woman, amateur or professional.

7. Entries will be made under the nationality of the crew. The yacht need not have been designed or built in that country.

8. Entries may be sponsored and/or financed by another person, body or organisation.

9. Each intending entrant should apply in writing to The Secretary, Royal Western Yacht Club of England, enclosing cheque or money order for his entrance fee (Rules 10 and 11), made payable to the Secretary, Royal Western Yacht Club.

Entrance Fees

10. For applications reaching the Club on or before **Friday, 15th May, 1960**, the entrance fees will be £15 0s. 0d. This will be refunded to the entrant after he has officially started in the race, and has arrived singlehanded at any port over 100 miles from the start. Otherwise it will be retained.

11. Late entries may be accepted up to and including Saturday, June 4th, 1960, but must be accompanied by an entrance fee of £25 0s. 0d. which will not be refunded.

Evidence of Qualification

12. An entrant must have completed a singlehanded qualifying cruise of a nature to satisfy the organising committee, or, alternatively, must furnish a Certificate of Competence. This will be accepted in lieu of Evidence of Qualification, provided that it is signed by a Flag Officer of an established Yacht Club or other competent body known and approved by the Organisers. The Certificate must say of the competitor that he/she "is in my opinion competent to undertake a long singlehanded ocean passage in a small yacht".

Passport and Visa

13. Entrants will be required to furnish themselves with, and to produce before the race, valid documents for entry into the U.S.A.

Crew's Undertakings

14. An entrant who has been provisionally accepted will next be required to sign undertakings:—

- (a) absolving the sponsors and organisers from any responsibility towards his person, his yacht, or any third parties with whom he may become involved;
- (b) accepting the jurisdiction of the Organisers on all matters to do with eligibility and disqualification;
- (c) accepting the jurisdiction of the Organisers on all matters to do with trophies and awards;
- (d) agreeing to assist the Organisers by doing all he can to send back position and condition reports during the course of the race. (This may involve the use of radio transmission, assuming that the necessary equipment is available.).

Eligibility of Yachts

15. Yachts of any size or type may enter, subject to the decision of the Organisers. (It is not their desire to exclude yachts solely on grounds of unconventional type or design). There will be no handicapping.

16. No means of propulsion may be employed other than the force of the wind, the manpower of the crew, or both.
17. An internal combustion engine, which must be incapable of being used to propel the yacht, may be used to generate electricity for lighting or radio, but NOT for operating self-steering gear, nor for handling sails or ground tackle. This engine may be the yacht's auxiliary engine, provided that the propellor has been removed, or the shaft sealed before the start.

Inspection

18. Each yacht will be open to inspection by the Organisers, and by other entrants, at a specified time before the start, and again immediately after the finish.
19. *Condition of Inspection.* Although no stipulations (except as stated elsewhere in the rules) will be made as to design, construction, rig, or equipment of yachts, each yacht will be required to pass a "Condition Inspection", after she is afloat, and equipped with all essential sailing equipment for the race. The inspection may be carried out by any practising Marine Surveyor, at the entrant's expense, not earlier than 15th March, 1960. Alternatively, it may be carried out at the Organisers' expense at Plymouth, by a Surveyor to be appointed by the Organisers, not earlier than 1st June, 1960. The results of such inspection will be recorded in the following form: "I/We hereby certify that I/we have today inspected the yacht.....(name, port, number, etc.).....lying afloat at, rigged and equipped with all essential sailing equipment (including navigational equipment) which..... (name of entrant) proposes to carry and use in the Singlehanded Atlantic Race. Insofar as it was possible to inspect them, I/we consider that the hull, decks, spars, rigging, sails, ground tackle, fittings and sailing equipment appeared to be in a good and serviceable condition, except for the following items..... (delete if necessary)". This certificate must reach the Organisers not later than 10 a.m. on Thursday, 9th June, 1960. If any item has failed to pass the inspection, the crew will be responsible for obtaining a further certificate, from the Organisers' Surveyor at Plymouth, that the items have been satisfactorily repaired or replaced. Failure to satisfy this rule will result in disqualification before the start.

Safety Equipment

20. The crew will be required to carry certain safety equipment, as listed below, throughout the race, and for maintaining it in serviceable condition. It is hoped that certain of these articles may be available on loan.

Inflatable Life Raft
Radar Reflector
Portable Loud Hailer
Foghorn
Daylight Distress Signals and Marker Dye
Flares and Pyrotechnic Distress Signals.

Conduct of Race

21. *Late Starters.* An entrant who fails to be ready for the start may arrange with the Organisers to be allowed to start at any time up to two weeks after the start, by arrangement with the Organisers, but will thereafter be regarded as having started at the official time.

Outside Assistance

22. No physical contact, except for the passing of written messages, may be made with other ships or boats at sea, and no stores to be received from any other ship during the race. They may, however, be asked for advice or information, and to report the yacht's position and condition.
23. During the race, a yacht may put in anywhere, and anchor or moor for any purpose. She may be towed for a distance not exceeding two miles into, and for a distance not exceeding two miles out of, any such harbour or anchorage, provided that the total result of such towage can be shown not to have advanced the yacht towards the finish. When actually moored or anchored, other people may come aboard, stores or equipment may be embarked, and repairs effected.

Responsibility

24. Yachts must be fully independent, and capable of carrying out their own emergency repairs at sea. Crews have no right to expect or demand rescue operations to be launched on their behalf.
25. Full responsibility for any mishap will rest with the owner or crew under ordinary processes of law. The Organisers do not accept any responsibility towards the entrants, nor towards third parties with whom the entrants may become involved.

Recognition

26. A distinguishing number should at all times be prominently displayed on the yacht's hull and sails.

Declaration

27. Immediately after finishing, each crew will be required to sign a declaration that he has sailed the race in accordance with all published rules, or, if any rule has been broken, to give a full account of the circumstances, establishing to what, if any, extent the yacht's progress towards the finish was helped by the breach in question.

Finishers

28. In order to qualify as a finisher, a yacht must finish not later than 11th September, 1960.

Authority

29. These rules, dated _____, are published by the Royal Western Yacht Club of England, who reserve the right to amend, or add to, the rules at any time up to the start of the race, such amendments being immediately promulgated to all entrants who have been provisionally accepted. Additional instructions will, in any case, be issued by the Organisers to cover details of the starting and finishing arrangements.

(Signed)

Chairman of the Singlehanded Atlantic Race Committee.

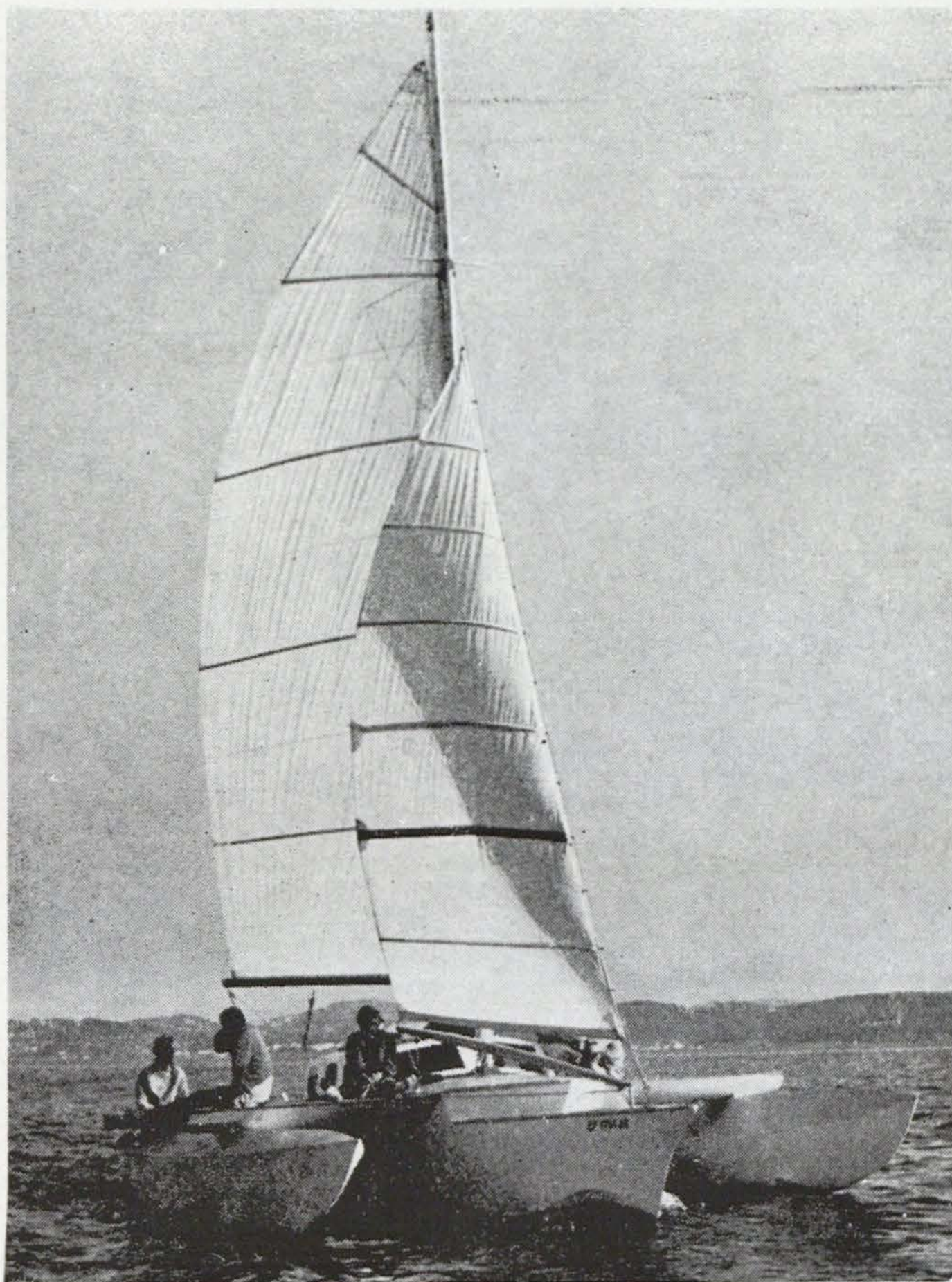
In January 1960 Francis Chichester was Acting Secretary for the race and he wrote to intending competitors to say that the time of the race start was now to be 10 a.m. on June the 11th from Plymouth, off the Hoe. He also wrote that rules and prizes were about to be finalised and the organising Club would forward a copy of the rules and entrance form as soon as they were printed.

When the above Rules and Conditions of Entry arrived they more or less confirmed the original rules except that the rule on qualification contained an escape clause so that anyone who could get a signed certificate to say that he was considered competent, need not undertake the qualifying cruise. The rule allowing powered or electric self steering was altered to prohibit the use of power for self steering, handling sails or ground tackle. Radio transmitters were allowed and safety equipment including inflatable life raft, radar reflector, portable loud hailer, foghorn, daylight distress signals. Marker dye had to be carried. The rule that the above water hull and deck have high visibility yellow paint was dropped because one of the original entries for the race refused to paint his yacht. In order to qualify as a finisher all yachts had to arrive not later than the 11th September, 1960. The entry fee was £15 0s. 0d. which was to be refunded to the entrant after officially starting in the race and arriving singlehanded at any port over 100 miles from the start. Otherwise it was retained. These rules came from The Royal Western Yacht Club of England and the race was to be sponsored by the Observer newspaper.

As already mentioned there were five starters in the first race but in fact there are eight yachts on the card of sailing instructions. The five arrived and two books were written about their achievements. The other three paid their money and intended to start.

Number 6 was *NIMBLE*. She was sailed from the U.S.A. by Arthur Piver with a crew in order to take part in the event. The start was on the 11th June which was early in the season and for various reasons he was delayed. *NIMBLE* arrived in Plymouth just over a week late. The Observer of the 12th June, 1960 reported "Arthur Piver left America in his trimaran *NIMBLE* (a triple-hulled yacht) on May 11th and arrived in the Azores on June 2nd. He is reported to be shipping his yacht to Plymouth and his delayed start

need not be a handicap for he has the fastest boat.” While out sailing in Plymouth Sound, *NIMBLE* was dismasted and Piver retired from the race. This was the first trimaran many people in Plymouth had ever seen and she appeared very frail and light when compared with traditional craft.



Arthur Piver's *NIMBLE*

Number 7 was my boat *BLUE HAZE*. The qualifying cruise proved to me, then aged 24, that my 24 foot waterline sloop was not ready for an Atlantic crossing. She was to use an extra headsail for self steering and was therefore entered as a cutter. I was also delayed by rough weather and did not arrive in Plymouth until a week after the start. *BLUE HAZE* is an old West Solent Restricted class yacht with very low freeboard and good windward ability, the cockpit was reduced and made self draining for the race.

Number 8 was *SAYONARA*. She was a small cutter entered by W. Karminski of Germany. Unfortunately she was reported to have been dropped while being lifted by a crane just before starting for Plymouth.

There were other yachts preparing for the 1960 race including a catamaran. Their names did not appear on the list for numerous reasons. For each entry on the programme there were a lot of others who gave careful thought and dreamed of entering but were prevented by lack of time, cost—which must have included loss of earnings for up to six months—or lack of experience. If some of these had entered perhaps there would have been a faster crossing or perhaps a fatal accident. “If” was a word with great meaning for the first Solo Atlantic sailors.

With the sailing instructions, competitors received a note on airway range radio frequencies in the U.S.A. which have now changed and a note on weather in the North Atlantic as expected from the American side.

FROM A SAILING SHIP'S SAILING DIRECTIONS CHANNEL TO NEWFOUNDLAND, CANADA & EASTERN U.S.A.

There are three principal routes, a Northern, and a Southern, and also a direct route. The Northern route should, as a rule, only be taken in autumn, when it is free from ice.

(a) **The Northern Route:** In this route, although heavy weather is frequently experienced, the winds are generally more favourable, and the currents from the Arctic assist in the latter part of the voyage.

When clear of the British Isles stand westward and cross the meridian of 30° . W. in about lat. 55° . N.; then steer, according to destination, for the Strait of Belle Isle, for St. John's or for Canadian or United States ports.

Bound for the Gulf of St. Lawrence or Halifax, either endeavour to make Cape Race by passing north of Virgin rocks, or, in order to avoid the ice, cross the banks on the parallel of 44° . N., and haul up on the proper course on reaching longitude 55° . W., heavy ice being seldom met with westward of that meridian.

Bound Westward of Cape Race, pass south-eastwards of that cape, making it if the weather is clear, and thence steer for a position southward of St. Pierre Island. While on the Great Bank of Newfoundland during fog, or when there is uncertainty regarding the position, soundings should be obtained frequently, and an indraught towards the coast of Newfoundland guarded against.

Notes:—The south coast of Newfoundland, eastward of Cape Ray, is broken, rocky and dangerous, and the tidal streams are influenced by the winds. Southerly and easterly winds, and often also southwesterly winds, bring a thick fog, which is most dense near the lee shore. This coast therefore should not be approached, excepting with a decided northerly wind and clear weather.

Sable Island should be given a wide berth, as it is a very dangerous locality owing to the prevalent fogs and variable currents near it. Sounding should never be neglected in crossing the banks and should be continuous whether bound for a Nova Scotia or a United States port. In thick weather, the thermometer is also a useful guide in approaching the banks of Newfoundland, as the temperature of the water falls on nearing them.

With south-westerly winds, while foggy eastward of the meridian of Flint Island, Cape Breton Island, it is frequently clear for some miles off the land westward of it.

CAUTION: All this portion of the sea, from the eastern limits of the bank of Newfoundland, past Cape Race to Halifax, as well as Portland, Boston, or other harbours on the coast of the United States, is within the limits of soundings, and therefore, during foggy weather, or when in doubt respecting the ship's position, frequent use should be made of this circumstance.

(b) **The Southern Route:** This is the best route to be followed during the whole year excepting the autumn months, on account of the better weather likely to be experienced, the certainty of the wind, and the avoidance of both fog and ice off the Newfoundland banks, during the spring and early part of the summer months.

By this route, leaving the Channel with a fair wind, steer a direct course as long as it lasts, and at least ensure sufficient westing to avoid the danger of being set into the Bay of Biscay. When the fair wind falls, take the Madeira route and if the wind permits pass midway between it and the Azores into the north east Trade Wind, but if the wind does not favour, the Trade Wind will usually be gained sooner by passing nearer to Madeira. In that neighbourhood, it is usually found in the summer season between lat. 32° and 31° North, in winter a degree or so further south.

Bound for New York, or other United States ports, when well into the Trade Wind limits, run westward, keeping southward of latitude 25° N. until in about longitude 65° W., then steer north-westward for any United States port, hauling out rather earlier for the northern ports and rather later for the southern ports.

(c) **The Direct Route:** This route across the Atlantic from the Channel to Boston or New York, which is about 1,000 miles shorter than the Southern route, can seldom be taken on account of the prevailing westerly winds, and of the north Atlantic current and Gulf Stream combined, running contrary to the desired track. It is, however, recommended by some navigators, making as directly as possible from the Channel, to cross long. 50° W. at lat. 45° N. and thence to the desired port. Leaving with an easterly wind it may be found a better way to steer West, and if the wind should veer by the south towards the west, to continue on the port tack until by changing, the vessel could lie its course. If the wind should continue to veer to the northward and as it sometimes does, to the eastward of north, a vessel on the starboard tack might be allowed to head to the westward of the direct course; on both tacks she would have sailed on curved lines, the object of which would be to carry her to the westward against the prevailing winds and currents.

Note:—The colour of the Gulf Stream is a deep indigo blue, and the junction with ordinary sea water, on its northern edge, is distinctly marked. On crossing the northern limit of the Stream, the temperature of the sea has been observed to fall as much as 30° F.

THE 1964 OSTAR

The impact of the 1960 OSTAR on yachtsmen was immense. It proved to the satisfaction of most of us that an east to west crossing of the Atlantic singlehanded was not unreasonably risky. It was therefore with more confidence that the Royal Western Yacht Club of England announced that there would be a second OSTAR in 1964. This time, 15 yachts started.

In general, the rules of the Race were kept the same. The main alterations were as follows:—

1. The finishing line was changed to Newport, Rhode Island under the control of the New York Yacht Club and the Ida Lewis Yacht Club.

2. As a result of the experience of the competitors in the Nantucket shoals in the 1960 Race, it was decided that this hazard should be avoided by routing the yachts South of Nantucket.

3. A handicap award was offered "If sufficient entries were received . . ." to be based on the formula $\frac{\sqrt{L + 2}}{10}$ where L is as that used in the RORC formula. Multihulls were excluded from this handicap award.

The full rules are given in Appendix I at the end of this publication.

THE ENTRANTS were as follows, placed in the order of finishings:—

1964 Age		LOA	Passage Days Hrs Min			Handicap Days Hrs			Place
32	1 <i>PEN DUICK II</i> (E. Tabarly)	44'	27	3	56	21	13	Ketch	1 Plywood
63	2 <i>GIPSY MOTH III</i> (F. Chichester)	39'	29	23	57	22	18	Cutter	2 Wood Carvel
37	3 <i>AKKA</i> (Val Howells)	35'	32	18	8	24	7	Cutter	3 Steel
55	4 <i>LIVELY LADY</i> (Alec Rose)	36'	36	17	30	27	9	Cutter	5 Carvel Teak
50	5 <i>JESTER</i> (Lt. Col. Hasler)	25'	37	22	5	25	4	Chinese Lugsail	4 Wood
38	6 <i>STARDRIFT</i> (Bill Howell)	30'	38	3	23	27	12	Cutter	6 Wood
46	7 <i>REHU MOANA</i> (David Lewis) (Catamaran)	40'	38	12	4	—	—	Cutter	— Plywood
28	8 <i>ILALA</i> (Michael Ellison) (Dismasted 1500 miles under jury rig)	36'	46	6	26	34	20	Chinese Lugsail Schooner	9 Fibre- glass
44	9 <i>GOLIF</i> (Jean Lacombe)	22'	46	7	5	30	0	Sloop	7 Fibre- glass
28	10 <i>VANDA CAELEA</i> (R. D. H. Bunker)	25'	49	18	45	32	22	Sloop	8 Wood Clinker
32	11 <i>MISTY MILLER</i> (Michael Butterfield) (Cat)	30'	53	0	5	—	—	Cutter	— Cold Mould
33	12 <i>ERIGHT</i> (G. Chaffey)	31'	60	11	15	42	23	Cutter	10 Wood
31	13 <i>FOLATRE</i> (Derek Kelsall) (Trimaran) (Includes 27 days while putting back to Plymouth for rudder damage)	35'	61	14	4	—	—	Ketch	— Plywood
45	14 <i>MARCO POLO</i> (Axel Pedersen)	28'	63	13	30	44	21	Ketch	11 Wood
45	15 <i>TAMMIE NORIE</i> (R. McCurdy)	40'	did not finish					Ketch	Wood

A 22 ton ketch called *MORNA* was entered by C. McLendon but she was seriously damaged by an explosion about two weeks before the start of the race. McLendon was ashore at the time and he had left the battery charging engine running. He had intended to transmit daily reports to the Daily Mail newspaper and the Kestrel transmitter was transferred to Mike Ellison's *ILALA* at the 11th hour.

Once again, these are the craft that paid £15 0s. 0d. (not refunded to anyone in this event). There were many more who would have liked to enter but were prevented from doing so, including Arthur Piver who entered his 38 foot trimaran *BIRD*. He was again delayed by damage on his passage to England.

In the second race, the rules were the same as for the first race, except that the starting date was 23rd May and craft had to finish before the 1st September. The sailing instructions were altered so that the course was:

Cross the starting line from north to south. Leave Melampus Buoy to starboard and distance mark to port. Thence to Newport passing South of Nantucket.

The Preliminary Notice for the second race was available in 1961 and the rules were published in January 1962. Already plenty of work was being done on ideas for suitable craft to win the race.

It is interesting to note that all the starters in the 1960 event also entered and started in the 1964 event. As would be expected they sailed faster, or rather, made better time, than similar sized craft in the first OSTAR. For example, Col. Hasler in his 25 foot Folkboat *JESTER* made the crossing in under 38 days as compared with 48 days in 1960.

A problem for would-be entrants from the U.S.A. is that their sailing season does not seem to start before the end of April in their more popular northern waters and this does not give time for fitting out and the 30 days or so that it can take to reach Plymouth. For Europeans a later start to the race would not have allowed the slower yachts to return home before the hurricane season. Only a few of the more wealthy owners can afford to have their yachts shipped home on deck and in any case it is possible to find a crew in the U.S.A. for a return passage which can be an interesting voyage without having to race. After the race, *GIPSY MOTH III*, *LIVELY LADY*, *JESTER*, *STARDRIFT*, *ILALA* and later the catamaran *MISTY MILLER* sailed back while David Lewis sailed on round the world in his catamaran *REHU MOANA*. Only *LIVELY LADY* and *JESTER* returned single handed.

Of the yachts in the race the first six were more or less conventional yachts sailed by very experienced men. All except Tabarly had considerable previous single-handed experience. The first eight yachts except *JESTER* were equipped with radio transmitters and receivers. Tabarly in *PEN DUICK II* refused to use his for transmitting. He was on pay by the French Navy and was determined to win. The French Embassy looked after his needs in the U.S.A. and his yacht, the largest in the race, was built for the job. By driving himself to the limit at all times he achieved his ambition. His only trouble seems to have been with self steering. A well balanced ketch should hold her course reasonably well and the fact that he chose the same

self steering equipment for the 1968 event possibly means that the trouble was not serious.

GIPSY MOTH III arrived nearly three days after *PEN DUICK II*, this time is long because, when he arrived, Tabarly seemed to switch off the wind, or at least to take the wind out of his rivals' sails. The calms and light southerly winds with fog which started when Tabarly arrived continued until after *MARCO POLO* arrived 63 days out from Plymouth.

Francis Chichester in *GIPSY MOTH III* had the advantage of the experience of two previous crossings and he was probably as determined to win as Tabarly. His yacht was very well ready but she carried all her usual equipment and was built to RORC rule shape.

The third yacht was *AKKA* sailed by Val Howells. This was a standard production yacht being sailed to America for her new owner. At the start, a pleasure craft rammed *AKKA* damaging the Hasler self steering gear and he had to delay for repairs. Next a rigging failure caused Val Howells to call into port in the South of Ireland for repair. This second delay must have been very frustrating but it may have placed him further north than he would have been otherwise and he may have had the advantage of more favourable winds to make up for the delay.

The fourth to arrive was *LIVELY LADY* sailed by Alec Rose. He was just as determined to do well in the race as any of the others. One report says that while becalmed off Lands End just after the start he went round the yacht and after deciding that she was too heavy he threw away an anchor and some chain because it would not be needed until after the race.

Like Alec Rose with *LIVELY LADY*, Col. Hasler in *JESTER* and Bill Howell in *STARDRIFT* did not report any damage of any kind. Hasler took *JESTER* far to the north and he does not say much about his adventure. Alec Rose and Bill Howell read a lot of books and spent some time looking at the sea astern. (Spray makes it uncomfortable to look ahead).

REHU MOANA is a very heavy catamaran and although well tested and prepared for the race she had a number of untried fittings. Getting out on deck and adjusting the self steering gear were not very easy to do when single handed. Dr. Lewis fitted an aircraft cockpit cover back-to-front over the steering position. There was a comfortable seat and a large wheel. His only troubles with this seemed to be heat from the sun and a tendency to fall asleep in the chair. Dr. Lewis had trouble with his boom which broke on 4th June. When repaired the boom was short so that he could only set a reefed mainsail and as this upset the balance he had to reduce the size of the headsails. This was done shortly before Tabarly arrived so that from completing the repairs he experienced only calms and light head winds. The damage was done by a storm with winds of up to force 10 which blew for about three days and seems to have missed the leading yachts and those to the north.

ILALA was lent to me (Mike Ellison) for the race by her owner. An account of my problems has been written and follows these notes. My troubles might have been prevented by an extra check before sailing but a lot of homework will have to be done before large unstayed masts become reliable and generally acceptable.

GOLIF was a standard production fibreglass 22 foot French sloop sailed by J. Lacombe. He sailed into Newport within two hours of *ILALA* looking as if she had sailed no more than 20 miles from port. The main boom, a tiny spar, had broken and been repaired using part of the spinnaker boom but this had been done so neatly that it was hardly noticeable. J. Lacombe kept well to the south on a similar passage to the one he made in 1960 except that he reduced his time by 23 days sailing a similar sized yacht. Keeping to the south did not save him from heavy weather and calms.

VANDA CAELEA is a standard clinker built sloop-rigged Folkboat and was sailed by Bob Bunker. His entry resulted in each competitor receiving a supply of Guinness for the race with a charming note to say that as Mr. Bunker would be carrying a supply it was only fair that the other competitors should have the same source of extra strength available. Bob Bunker had to climb the mast at sea and had the bad luck to fall and break his wrist. This caused him considerable pain. He was also troubled by calms and the sun caused the laps of the clinker plating to open forward.

MISTY MILLER was a late entry by Mike Butterfield, a cutter rigged catamaran which was fitted with two deep keels with ballast weights at their lower ends which, together with the masthead float, made her self righting in the event of a capsize. Mike chose a route south of the gulf stream and north of the Azores. He called at the island of Flores where he was guided into a tiny harbour by a fisherman. He completed some minor repairs, stocked up with some excellent local wine and set out again. He was troubled by head winds and in order to keep *MISTY MILLER* sailing well through the head seas he did not point too close to the wind. A number of times after tacking he found, partly due to wind changes, that he had made no progress towards Newport. During a spell of rough weather the side load on the port keel became too great and it parted from the hull with its ballast. The loss of the keel meant that Mike had to get up and pump at intervals of about three hours for the remainder of the passage. A large amount of water entered the port hull and a lot of the food and stores were damaged or wasted. *MISTY MILLER* was equipped with a radio transmitter and receiver but early in the race sea water got to the batteries stowed in the aft lockers during rough weather so that no power was available for general transmission. Paraffin was used for cooking and navigation lights. *MISTY MILLER* was very well equipped but carried a lot of heavy items such as an outboard motor which reduced her performance. She had polystyrene foam stowed in the hulls to ensure that if the hulls should flood she would remain afloat. Including time in the Azores Mike took 53 days to reach Newport.

Like Mike Butterfield, Geoffrey Chaffey took *ERIGHT* South to warmer waters and he also had to call at the Azores for minor repairs. *ERIGHT* was a small cutter which Geoffrey bought without seeing while he was in India. She is a comfortable small cruising yacht fitted with a fairly heavy engine, which, like most of the engines carried by competitors in this race, had seized solid by the time he arrived in Newport. His main difficulty seemed to be finding the finishing line in the thick fog which seemed to prevail off Newport during the Summer of 1964.

The Piver designed trimaran *FOLATRE* was built especially for the race by Derek Kelsall who entered and sailed her. She was built of plywood and the only difference between this craft and a standard design was that Derek did not build a cabin but kept a flat deck right across from float to float. She was kept very light and was fitted with a mizzen mast and sail. Under sail she proved fast, stable and steady when holding her course without self steering. The race started on 23rd May and on the 4th June *FOLATRE* arrived off Plymouth with the rudder broken. Some 550 miles out Derek thinks she hit some wreckage or a whale and it says a lot for his construction that there was no serious hull damage as well as the lost rudder. Having repaired the rudder and self steering gear Derek Kelsall set out again on 19th June and made a 34 day crossing to Newport favouring a direct route south of the Great Circle track. Total time of 61 days includes the extra time taken while returning for repairs against head winds and the time taken to complete the repairs in Plymouth. After the race Derek Kelsall got married in Newport and then sailed south with his wife on the trimaran.

The last to arrive was Axel Pedersen sailing *MARCO POLO*. Axel did not start until the 26th May having been delayed by head winds on his passage from Denmark. *MARCO POLO* is a very strong and heavy 28 foot ketch and Axel took the southern route but did not go south to the trade winds. She was the only craft in the race to carry 'baggy wrinkle' which is fitted to prevent chafe as the sails rub on the rigging while running down wind. Axel was delayed by three weeks of calm weather during which he made no progress. He was not sighted during the voyage so that his arrival at Newport on July 26 after 60 days alone at sea, 63 days after the start of the race, was a good reason for celebration by the other competitors who were still in port with their many new found American friends and helpers. Everyone was very pleased that all but one of the yachts to start had arrived. The other starter, *TAMMIE NORIE*, sailed by Doctor R. McCurdy had returned to Plymouth with the radio and chronometer damaged. McCurdy retired from the race and then sailed to America in his own time and did not call at Newport.

After the race Axel Pedersen sailed down to New York and found a steady job for a time. Axel is a very experienced yachtsman who has made many single handed voyages including a crossing in a yacht which he built himself in New Zealand. In this way all the competitors drifted away. Many met again in London for the prize giving but by then most were thinking of "next time" and of the most suitable craft for this race to be held in 1968.

THE SUNDAY TIMES COMMENTS ON THE OSTAR

The first OSTAR was hardly reported by the ordinary English papers at all. However, by the time the second race came along, it was realised that the race was "News" not only to yachtsmen but to the ordinary man in the street. It seems that vast numbers of people have a secret wish to sail across an ocean and are only kept from doing so by lack of time, money and expertise.

From the newspaper clipping which we have, we have selected two items from the SUNDAY TIMES, which we print by courtesy of the Editor. The first of these gives a contemporary view of the start by Moira Keenan. The second, by Brian Glanville, tries to give an idea of the motivation of entrants by an analogy with the motivations of teen-aged mobs. The yachtsmen direct their "aggression" towards the sea while the teen-age mobs wander around with their "aggression" dangling from their wrists. In this connection, it is salutary to remember that the Crimean War—a motiveless War, if ever there was one—was deliberately started by the English and French "statesmen" because they felt that their young men were becoming bored, effete or effeminate. Yachting, in all forms, is a good outlet for "aggression" as well as mental and physical energy. It is one of the ways in which we can direct those instincts which would otherwise lead us to war.

If we were in charge of education, we would see that every boy (or girl if she wanted to) built a boat with his own hands. The saving in damage to public and private property would easily pay for the cost.

A SURPRISE STARTER IN OCEAN RACE

by Moira Keenan

Plymouth, Saturday

Fourteen of the 15 entrants in the 3,000-mile "Observer" Trophy single-handed trans-atlantic race from Plymouth to Rhode Island crossed the starting line today, in just the right conditions—a cold easterly wind.

The 15th entry, Axel Pedersen, from Denmark, arrived an hour late, but after making the final preparations he will be able to pursue the others in a day or so.

The surprise of the race has been an anonymous entry, not listed on the programme, who turns out to be Mike Butterfield, a Cobham solicitor, sailing a catamaran.

For the crowds filling the green slopes of the Hoe, where Drake played his legendary game of bowls, it was hard to pick out the boats of the competitors, tacking to and fro between an armada of tall ships—preparing for their race tomorrow—motor-boats and sailing craft of every kind.

The easiest boat to spot was the Chinese schooner, sailed by Mike Ellison. Her tall, narrow sails, stiffened by bamboo battens, hardly seemed to bend to the wind at all. Nearly as exotic was the tiny, yellow-hulled Chinese lug of ex-commando, Lt.-Col. H. G. "Blondie" Hasler, a cockleshell boat for a cockleshell hero.

In sharp contrast to each other were the two French entries—one the smallest and the other the largest in the race. *PEN DUICK II*, the 45 ft ketch sailed by Lt. E. Tabarly of the French navy, was tipped as the likely winner. If crossing the starting line first is an advantage, he already has it.



Mike Butterfield's MISTY MILLER designed by Mike Henderson

SAILING ALONE FROM A TAME LIFE

by Brian Glanville

The relationship between the 14 hardy men who set out alone yesterday from Plymouth across the Atlantic and teenaged mobs may seem quite tenuous. Yet it exists, for each in their way are making a protest against the comfortable sterility of modern life.

George Orwell told us 27 years ago where we were going: "All mechanical progress is towards greater and greater efficiency; ultimately, therefore,

towards a world in which *nothing goes wrong*." Mechanical progress tended to eliminate physical danger; thus physical courage itself could hardly survive.

The yachtsmen who sailed from Plymouth, in the second "Observer" trophy race, are as deliberately courting physical danger, as surely as the sea-side louts at Whitsun were courting violence and excitement. Knocking off a policeman's helmet or shoving an old woman off the pavement are cheaper, more transient thrills than navigating a little sailing craft across 3,000 miles of unpredictable sea, but the actions have this much in common: they are gratuitous. You can fly the Atlantic in seven hours, with as much sensation of travel as going up in a lift; you can lie on the beach playing pop records, without incurring Black Marias and avenging magistrates.

Physical risk

The Atlantic yachtsman, the mountaineer, the Arctic explorer have physical risk as a common denominator. The racing driver hoists the Machine Age with its own petard by using the machine to make life immeasurably more, rather than less, dangerous.

The yachtsman takes less of a risk—in the 1960 race, every craft survived—but his rejection of the age is more complete, in that it involves solitude rather than crowd hysteria, sail rather than internal combustion engines, the elements rather than the stadium. In mid-Atlantic, with the spray stabbing at his face: high on a mountain, with the wind buffeting about him, or deep at the bottom of a pothole, a man has done more than simply "escape"; he has established a contact with Nature cruelly excluded by the urban life. To call these "escapist sports" is wantonly superficial; in the need they satisfy, they are nothing if not realistic.

One would, inevitably, look in vain for each of these qualities and determinants in any one competitor. "The whole point is," as 55-year-old Alec Rose put it, "we're individuals. We're very individual." Yet the qualities and motives are all there, however distributed and diffused.

Mr. Rose himself perfectly embodies several of them. He is a fruit merchant in Southsea, though he comes from Canterbury. He went into the R.N.V.R. as an engineer, sailed on convoys to Russia, taught himself to sail after the war ("I'm always a good listener; I believe in letting everybody tell me, then I work it out for myself afterwards"), built his own boat, but in this race is sailing a yacht that was built for him.

"The sea to me," he said, "is Father Neptune. I don't mind telling you that I have got respect for him. He'll have a go at you, and try to sort of get you, but there's no need to regard him exactly as an enemy; it's him or me sort of thing."

By contrast, 37-year-old Val Howells, a fine, handsome, bearded figure, who looks and sounds the quintessence of what a transatlantic yachtsman should, reacts vigorously to any suggestion that the race is in some sense a battle. "I don't like the expression 'a battle' and 'conquering the North Atlantic'—it's a lot of rubbish. You may conquer a mountain, which I doubt very much. You don't conquer an ocean; you *sail* an ocean."

He is similarly deprecating about the modicum of risk. "Most sports have an element of risk in them—ski-ing, gliding, mountaineering, pot-holing.

In fact, I think sailing is a relatively safe sport. Tell me how many starters you had for the last Grand National, and how many finished?"

To Alec Rose, however, "There *is* risk attached to it; I suppose that is the whole spur, isn't it? A little bit of dangerous living, shall we say?"

A third, quite diverse, view is expressed by the young Master Mariner, R. M. Ellison, who prepared for the race in a happy cluster of relatives and friends, as though for some nautical picnic. Did the danger compel him, he was asked, and he answered: "No, it frightens you. No, I'm not attracted by danger at all."

Broader dimension

What attracts him is "the fact it's a *race*, I think," yet it's a strange race in which, in the words of Rose, "after the first couple of days, we shan't see each other." Ellison, though, with characteristic honesty, admits, "Without the fact of its being a race, I don't think I would ever go across the Atlantic on my own, I don't know whether I would have had the courage or not."

In Howell's case the element of risk takes on another, broader dimension. To sail in this race he has given up a restaurant near Pontypridd, on which he and his wife worked from the early hours of the morning to the small hours of the next day. To sail in the previous race he gave up a farm—"so that I didn't owe anybody a bob. But I don't think this is a desperate sort of step. People buy and sell businesses. When I come home, I'll look around and see what's about. I don't know if this is common, but I think it should be more widespread. In the States people don't think twice about throwing up their job and moving from one side of the Continent to the other, which is 4,000 miles. Here, if somebody moves to the other side of the town—my God!"

This is the authentic voice of the free spirit, protesting that modern life is thin and poor. If you are brave, rational and intelligent, you get into your yacht and sail across the Atlantic. If you are aimless, half-literate and anti-social, you put on outlandish clothes, get on a motor-scooter, and putter off down to the seaside to kick up hell. They are two sides of the same coin, but the problems have vastly different solutions, where they can be solved at all.

Meanwhile, the yachtsmen are on their difficult way, rebuking us with their self-sufficiency. "When you get out to sea," said Alec Rose, "you have a wonderful feeling of freedom. No one can touch you."

ILALA IN THE 1964 SINGLE-HANDED RACE

by Mike Ellison

My interest in the race began on the Merchant Ship *PORT HARDY* in 1958 when I first read that it was proposed to hold a single handed race across the Atlantic.

I wrote to a few firms selling various yachts and received polite reasons as to why they would not lend one to me.

Every entrant has a different private reason to sail the Atlantic. These can vary from various business and commercial reasons through interest in various forms of research to gaining self confidence or just the glory of winning. Most of these reasons probably applied to my case.

The race was due to start in June, 1960 and while on leave in April, I was offered a loan of enough money to buy a yacht and enter the race. I was told that it would be impossible to be ready in time and due to inexperience and a surveyor I did just fail to be ready. That it was possible has been proved by Derek Kelsall in the second race—he started building his trimaran seven weeks before the start.



ILALA sailing from Plymouth

In 1964 the race started on the 23rd May, probably to give the slower yachts more time to return before the hurricane season started. This didn't give much good weather in which to prepare. While fitting out my 35 foot sloop *BLUE HAZE* in Dover I saw an advertisement in the journal of the Little Ship Club reading "SINGLE-HANDER WANTED," Mrs. Barrington would like to lend her yacht *ILALA* (built 1962) to a square sail enthusiast who would like to sail her in the single-handed Transatlantic Race next June. She is ideal for this event; she is fitted with Col. Hasler's self steering gear. Yacht handed over in perfect order. Please write This seemed too good to be true so I wrote to find out. Two others wrote by the same post, one a

London taxi driver who had sailed a dinghy round the Serpentine and the other just didn't believe the offer could be true. I went to Cork to find out if I could handle the experimental rig. While I was there others wrote to ask if they could borrow *ILALA* but Mrs. Barrington said time was too short for them and I was the first to reply.

On 28th April I sailed from Cobh for Plymouth and took 36 hours to cover the 240 miles. This passage with force 7 winds was enough to make me watch the foremast and I decided to keep the engine, propeller and 80 gallons of fuel on board for the race in case I should lose both masts. The masts carry one flat sail each and because of their shape it is not possible to stay the masts. The foremast used to bend like a fishing rod. I was told not to worry too much and not to try and keep a lot of sail on it.

ILALA has a Nicholson 36 class hull fitted out for extended cruising and was rigged as a schooner using two flat sails with full battens after the style of a Chinese junk. The rig was designed by Col. Hasler and the foresail was similar to the sail on *JESTER*. The whole work of hoisting, lowering, reefing and trimming the two sails could be done from the cockpit provided the numerous sheets and halyards were kept clear. Each sail batten had its own sheet which involved a lot of rope.

Once in Plymouth I made lists, and lists of lists, and I took over a friend's garage as a store. Ten days before the start a journalist from the Daily Mail persuaded me to take the Marconi 'Kestrel' radio which had been fitted in McLendon's yacht for the race to send them daily reports. I was not keen to have it as they removed the Pye radio-telephone with 500 mile range and a D.F. for the other without a D.F. I had a small transistor D.F. set but it failed to work. *ILALA*'s echo sounder only works to 100 feet so I borrowed a patent atmospheric sounding tube from the Plymouth Navigation School. A 16 foot oar from a ship's lifeboat for use as spare rudder, rowing or spare spar, completed basic fitting out, although work proceeded for 20 hours a day during the last week, installing charging plants, changing from 12 to 24 volts, altering the galley and re-newing the rigging. The Sunday Times' reporter was moved to write that "Ellison on the other hand is surrounded by relations and friends and appears to be preparing for a sort of ocean picnic." In fact the unfortunate man arrived late one evening to find us eating fish and chips wrapped in his paper which even included one of his previous articles!

The night before the race I stayed in an hotel ashore and crept upstairs at 0330 carrying my shoes, having arranged a call for 0700. A friend who later sailed back with my brother Peter and I, was on board *ILALA* by 0500 lashing and stowing everything moveable. Peter and I went on board at 0900 and sailed into Plymouth Sound where Peter joined the Daily Mail launch and I sailed over the line after the gun because there was a 10 minute time penalty for every second any yacht crossed before it.

I was lucky. The voyage began with comfortable favourable weather, and, though everyone seemed to have a different idea of the way to the Lizard, after a suitable time lapse the light came up as I expected. I was called by the signal station as is usual for every ship. The light said "*GIPSY MOTH*

passed first." This part of the voyage was far enough to prove that the standard Sperry "Off course alarm" is useless in a yacht. It had been borrowed by the Daily Mail at the eleventh hour because I didn't have time to complete the one that I was making myself. It also proved to my great relief that the self steering gear as adjusted by Col. Hasler was working. It had never made a passage before without breaking up, mainly because it hadn't been fitted properly.

Sunday, 24th May was warm and sunny. I lazed about and enjoyed it, wondered about the race and what was to come. Unknown to me, to the north, Alec Rose sailing *LIVELY LADY* also had light winds, and he was going over his yacht throwing overboard all gear not directly helpful to the voyage. This included a 56 pound anchor and shows the object was to win and not just to arrive. In fact, all the starters completed the course. I arrived eighth after 46 days, one hour before Jean Lacombe in *GOLIF*, 21 ft 4 in sloop, and 19 days after Tabarly in *PEN DUICK II* a ketch, designed, built and sailed to win the race.

The winds at first were favourable but by Tuesday there was a northerly breeze, moderate to fresh, and the experimental sail battens of polythene pipe started breaking and tearing the sails. I began a series of repairs which continued throughout the voyage. I cut broom and boathook handles and inserted them into the pipes with glue and then bound the repair. Only one repair parted. The sails were very heavy terylene cloth. Canvas would have blown to ribbons but a tear in terylene does not seem to run like a tear in canvas.

On the 2nd and 3rd of June the wind reached strong gale and for the first and only time on the voyage I was seasick. I was not sure of my position which did not worry me except that I could not go to help any other competitor in trouble. I was worried about the catamaran *MISTY MILLER* and the trimaran *FOLATRE*. Later I found I was correct in thinking that these two might be in trouble, *MISTY MILLER* put into the Azores for repairs and then later lost one complete keel. *FOLATRE* returned to Plymouth after hitting a whale or other object, but, after repairs, Derek Kelsall set out again.

On the 3rd of June I started a series of daily radio contacts with David Lewis on *REHU MOANA*, his catamaran. He was not far ahead and I found it very interesting and encouraging to hear about his problems and weather. In a calm I would picture the other yachts with sails full racing on ahead. I know Dr. Lewis felt the same and was very pleased when I reported a calm.

One evening I asked him about my bread which started to go green. He said it was good but might have a slight laxative effect. After that call, I wondered if he was helpful or trying to slow my progress. I continued to eat the bread and was still using it when I arrived at Newport.

On the 7th June at 0115 the mainsail furled itself. The eye of the three sheave main halyard block was made of bronze and had been secured by a stainless shackle to the masthead. The bronze had worn through by constant movement leaving me without a purchase to hoist the sail. I continued under the foresail waiting first for daylight and then for the sea to moderate before climbing to the masthead on a rope ladder hoisted on the spare halyard.

To hoist the mainsail without a purchase at the masthead would overload the mast.

The wind increased from Force 6 at sunrise to Force 8 at sunset and continued at gale force throughout the night. On the 9th June there was Force 6 which increased to Force 9 in the afternoon so that I should not have carried sail anyway. However I did have two small panels of the foresail up to steady the yacht.

At dawn on 10th June the wind died to Force 2 but there was a heavy and very confused swell. I replaced the spare main-mast halyard with a new rope and was splicing the end to the ladder when the foremast fell gently overboard to windward. Having entered 0915 in the log I retrieved the broken mast, sail and rigging from the sea and secured them. I then completed the splice and hoisted the ladder but was too frightened by the movement to climb more than half way to the masthead. Having returned to the deck I lowered the ladder and used the spare halyard to hoist a spare main halyard block to the masthead with a rope strapped round the mast. When I pulled on the main halyard the strap tightened round the tapered mast and at the second attempt I managed to get the strap to grip near the masthead which allowed me to set four fifths of the mainsail.

I next rigged the oar as a foremast and after due consideration decided to continue to sail on to Newport, R.I. but to keep south to avoid collision with the icebergs off the Grand Banks. I was pleased to have my position confirmed by the S.S. Mauritania on the 14th June and I passed through the southern end of the iceberg area onto the banks in latitude $44^{\circ} 20'$ north on the 16th and 17th June.



ILALA arriving at Newport 1964

After crossing into soundings the weather changed and for the rest of the voyage the wind only reached a near gale on one afternoon. Fog, calms and head winds came one after the other. With my reduced sail area it became impossible to average the 75 miles a day I had estimated. The sea was mainly calm and life became more pleasant, instead of mending battens and repairing the mainsail I had to concentrate on navigation and get sights when I could. My fog horn is the type you blow and was not thought to be suitable before the race. However as approaching engine noises came closer and closer I would blow harder—which seemed very satisfactory. The missing D.F. set would have been very useful but in due course I sighted the Nantucket Light Vessel in six mile visibility just where I expected it to be. I sailed up to it but didn't see anyone, not surprising at 0300, so I turned right and arrived next afternoon at Newport, R.I. just as the trials for the America cup were starting. I was soon surrounded by tins of iced beer and knew exactly where to dock. I refused all offers of a tow and sailed into my allotted berth where my 'holiday' ended and work began.

It took about ten minutes to clear customs. The local official was very upset that I had fresh potatoes, carrots and apples on board; he left with them in a bag. After this, I was asked if I would speak to the local radio station who were on the 'phone. I picked up the receiver and heard: "Is that Mr. Ellison?"

"Yes."

"You are on the air." I was quite sure that I was on the land and said so. The voice said, "No, you are speaking to an estimated 28,000 people, did you enjoy the race?"

My three week stay in Newport was exhausting but very pleasant. Each of the 7 yachts after me was also given a great welcome when they arrived. My brother had flown out and we worked on repairs in the mornings, tried to organise groups of willing helpers and answer questions in the afternoons. Every night there was a party somewhere to celebrate something. We quickly found that it was not possible to repair the broken mast and that even to have a tree cut and delivered would cover over 370 dollars. We considered a telephone pole or returning without a foremast but a friend solved the problem. When returning home one evening, he nearly hit a lamp post, and this gave him an idea for a mast—a lamp post. So, next morning, we went to the Electricity Co., and bought a lamp post, less base and contemporary light fitting, for 10 dollars. It had exactly the taper of the original mast and as it was not long enough we cut the top section off the wooden mast and inserted it into the tapered aluminium tube from the bottom. When it became firm we put a stainless steel pin through both parts to hold it. The next step was to cut the heel off the old mast and fit that into the bottom of the lamp post with wedges. We stepped the mast using the main halyard and to make certain the wood to aluminium joint would hold, I drilled a small hole and poured cement round the wedges to above the deck level. The only work I paid to have done was the machine planing of six new ash sail battens 15 feet long which took one man one hour. The man's wages cost me six dollars which is the reason for doing all the other work ourselves.



ILALA arriving at Newport 1964

The British post office strike delayed our new mainsail which Lucas of Southampton made in three days from receiving the order. A friend of the owner, an antique dealer, flew over with the new sail and returned with us to Ireland via Faial in the Azores.

Our return passage was pleasant and mainly uneventful. It took 20 days to cover 2,200 miles to Horta. We sighted the neighbouring island of Pico with its 7,700 foot peak at sunrise at a distance of 64 miles. In the Azores they still harpoon whales by hand from rowing boats. As this was 1964 they towed the whalers to within two miles of the whale and then towed the dead whales back to the island afterwards with a motor launch. The day we arrived they killed two whales and we got up at 5 a.m. to watch them being hauled into the factory and reduced to fertilizer. We also saw the repair of one of the boats which was not quick enough when attacked by a whale. These whalers are about 39 feet long with very fine lines, and carry a lot of sail. I was very keen to buy one but transport and money were no longer my only problems.

The Azores have a plentiful supply of cheap vegetables and wine. All types of sub-tropical fruit are on sale at the same time because one crop will ripen early low on the south shore and much later high on the north side of the island. We were very sorry to leave after four days but I had promised to be home as soon as possible.

The last stage of the voyage, with reasonable weather, took 12 days. We spent 10 days in Cobh, Ireland unloading and painting the yacht, packing equipment and reading newspaper accounts of the race. I left *ILALA* eight inches lighter than when we arrived and arrived at Fishguard with nearly a ton of equipment different ideas of "fully equipped."

“FOLATRE” 1964

by Derek Kelsall

In 1964, the three multihull entrants in the Single Handed Transatlantic Race were looked at with askance by many experienced yachtsmen. I was one of these men sailing my 35 foot Trimaran *FOLATRE*.

Two trimarans of similar design and only 5 feet longer have just completed the non-stop circumnavigation in the Sunday Times “Golden Globe” race.* At the same time, a number of multihulls, and trimarans in particular, have got into serious difficulties at sea. By 1972 we may well see several entrants sailing yachts of three times the length of the largest entrant in the same race in 1960. Such is the changing scene of the solo-sailing world and of the Multi versus Mono controversy.

So, remarkable boats have been built, remarkable feats been achieved, and new fields of sailing opened up.

But I do not believe that there can be any race to compare with 1964 when any man—or woman—with a boat had a chance of the big trophy. The cost of the electronics gadgets alone, carried aboard *SIR THOMAS LIPTON* would have easily paid for *FOLATRE* and all my expenses. Half a dozen entrants had boats of similar value.

Prior to the start, with perhaps just one or two exceptions, everyone in Plymouth got on with their preparations and the special gatherings organised by the Royal Western Yacht Club in a very carefree and enjoyable atmosphere. 1968 was a much more serious affair and with a lot of sponsors’ money at stake, this is perhaps understandable—but regrettable.

To return to 1964 and my own experience. My chance to enter came just 10 weeks before the starting date and I was living in the Bahamas and without a boat. At that time my sailing experience had been in sailing across the Atlantic west to east by the middle route and east to west via the Trade Winds. I chose the boat that I was most familiar with—not because I thought it was a fast design most likely to win but the only one that I believed that I had a chance of getting built in time and which I thought I could handle alone without any time for practice or modifications. Time was my main adversary. I did not give much thought to my chances of winning.

The story of the building, equipping and sail from Kent to Plymouth in less than eight weeks was much more of an ordeal than the solo sailing to follow. Needless to say, everything had to be as simple as possible and the equipment was kept to the absolute minimum. The only sea trials were the five days taken to sail to Plymouth in very light airs where we arrived with four days to spare or, should I say, to complete our preparations.

I must say that I was lucky in my choice of boat and equipment in that no alterations or modifications were necessary and *FOLATRE* sailed without any teething problems. At the start, solo sailing was still a new experience and my self steering gear still untried. This brings me to the most remarkable thing about my boat. The self steering was a somewhat crude affair. The

* Written before the sad fate of these craft was known.

vane was too small and the linkage much too inefficient. I had sailed for several days before I realised that the self steering was not doing its job and in fact careful attention to sail trimming was much more effective than adjusting the vane. The vane was dismantled and dropped overboard and I slept much happier with the course controlled mainly by the trim of the mizzen with the tiller lashed. I had a small wheel within the cabin that gave me very fine control on the tiller. Sheets led to the cabin hatch and with only a handful of sail changes during the crossing, my trip was rarely uncomfortable or arduous. I had a cruising rig with 2 headsails only so I was rarely concerned that I might get caught over canvassed.

At the start I, quite accidentally, happened to be exactly on the line as the gun fired so had an excellent view of my fellow competitors behind me. In the light following wind, Tabarly soon came past flying a large spinnaker which must have given him several times the sail area I was carrying. By midnight we had drifted as far as the Lizard where I came close enough to one yacht to recognise it as *GIPSY MOTH III*. Mostly, light airs followed for several days. These were pleasant days to recoup after the previous hectic weeks but I had no idea of how I stood in the race.

On the sixth day we got a bit of wind from the right direction and *FOLATRE* set off at a spanking pace for the first time. However, this was not to last—disaster struck. I came up onto deck from my bunk to find that *FOLATRE* would not answer the tiller. A glance over the transom showed the rudder ending in a ragged line at the water. I had heard nothing, but we had been travelling at better than 10 knots and there had been a lot of noise below. I assume that we had ridden over a submerged object that had carried away both my dagger board and rudder. The rudder had been a particularly stout piece of timber. To effect repairs I had the remains of the rudder and the remains of the board available and a hunt through the ships stores revealed three and three only, bolts long enough to go through both timbers.

Repairs took no longer than one hour, but I was not entirely happy with my handiwork, and I could see no way of improving the jury rudder with what I had available. A couple of hours of indecision followed—I was 550 miles out of Plymouth, over 2,000 miles from America and less than 200 from S.W. Ireland. I decided on the more cautious approach and to head for the closest Port and make repairs. I have since compared my position with that of *PEN DUICK II* and *GIPSY MOTH III* at that time. *PEN DUICK II* was 30 miles to the north and five miles west and *GIPSY MOTH III* some 30 miles south and five miles east. I shall always wonder how thing would have turned out had I made a different decision.

Having headed north east we got the perfect wind for sailing *west*—6-8 north east so I eventually changed my tack and decided to return to Plymouth and make a fresh start. In spite of my doubts the rudder held up through some quite rough going.

Briefly now—from the new start I arrived in Rhode Island 34 days later in 13th place.

We logged 217 miles in 24 hours. We endured days of soul destroying calms. We spent 17 days in fog. Scared by two very curious whales that were rather longer than the vessel and swam within 6 feet of the hull.

Found Sable Island a navigational headache and believe I sailed very close but without making a sight. Heartily wished I had spent an extra £25 on a depth sounder. My patent log had also become defunct and I had to guess my distance run.

Arrived in Newport in time to enjoy some of the celebrations, see the 12 metres race and to make wedding plans. Without Claire's assistance I would not have got as far as Plymouth. We then sailed leisurely down to the Bahamas.

Any experienced seaman would be justified in saying that I was foolhardy in setting sail with so little preparation and trials and indeed the rules of the race have been changed to such an extent that such an entry would no longer be acceptable. My only argument is that I knew every inch of the boat and I knew it to be sound and while I may not have agreed with Piver on all points of his design regarding efficient performance I had complete confidence in the seaworthiness of my flat-decked arrangement of this trimaran.

Looking to the future one might ask—speaking metaphorically—where are we going to with this race? With designers' interest, the prospects are indeed exciting. Thirty knot boats are on many drawing boards and large displacement yachts capable of averaging 250 miles a day are coming within the range with new sail handling techniques. Success is likely to go to the man most adept at promoting his entry, who is not necessarily the best seaman, but let us all try to keep this race as a sporting occasion in our sailing calendar.

JUNKS AND THE JUNK RIG

by John Morwood

The junk is a large trading barge of many types, most of which are found on the Yangtse river in China, the more primitive occurring in the upper reaches. One therefore supposes that it was developed there from the *SAMPAN*, a smaller craft. Details of these junks and sampans are to be found in the book "JUNKS AND SAMPANS OF THE YANGTSE RIVER" by G. R. G. Worcester, which is out of print at the moment. Another of Worcester's books "THE EVOLUTION OF THE JUNK" is still available.

The junk was very obviously developed from a log raft, as compared with the boats of the rest of the world, which were developed from the dug-out canoe. Even the most advanced junk betrays this origin by its flat bottom, planked by fore and aft logs made into planks by an adze. This flat bottom sweeps up forward to give an entry like a scow, and, like the scow, when the junk heels, the centres of the heeled underwater sections lie on a fore and aft line. This gives an excellent shape for going to windward in a river.

Usually, the topsides are just built on to the sides of the bottom more or less vertically around bulkheads, instead of using frames. This divides the ship into compartments. However, in the larger craft, frames are used as well, between the bulkheads.

Owing to its shape, the junk has not enough lateral resistance for windward sailing so the Chinese developed the leeboard and also a large "balanced" rudder. The rudder could be lowered to give extra grip on the water and had streamlined holes cut in it whose value has never been assessed by any tests of which I know.

The junk rigs

Junks used many rigs. In the upper Yangtse, the sail was a squaresail which could be converted into a standing lug by taking one clew to the foot of the mast. In the lower reaches of the River, a spritsail was used. However, the typical Chinese lug with multiple battens was the rig used at Hong Kong and for coastal fishing and trading vessels which went on remarkably long voyages. The Chinese traded to India and East Africa in historical times.

All Chinese sails were made from a mat of palm fronds up to the late 19th Century.

It is of interest to note that all the features of the junks and sampans which were used in Europe such as leeboards, the spritsail and the balanced lug all appeared in about the 14th Century, many in Venice. I put this down to the accounts of Marco Polo (1256-1323).

The chinese balanced lug

When the Europeans arrived in China with their sailing craft, they found the junks and sampans sailing about, often at far better speeds both to windward and to leeward than they could make. The hulls of the Chinese boats looked little different from theirs so they put this superiority down to the rig, perhaps not realising the importance of wetted surface and the straight "Metacentric shelf." It would appear that Europeans are still being deceived by the Chinese from all the recent boats fitted with this rig.

In fact, the Chinese balanced lugsail is an inefficient sail as compared with either gaff or Bermudian rig or even the European "Standing lug." This has been proved time and again by trials in racing and in the wind tunnels. The only thing to be said for it is that it is remarkably easy to reef and stow because lowering away on the halliard simply drops one or more (or all) of the battens (and the sail between them) into the branched topping lifts. It was, in fact, only used by the Chinese for sea-going junks as a general rule, the up-river craft preferring the spritsail.

The evolution of the chinese balanced lug

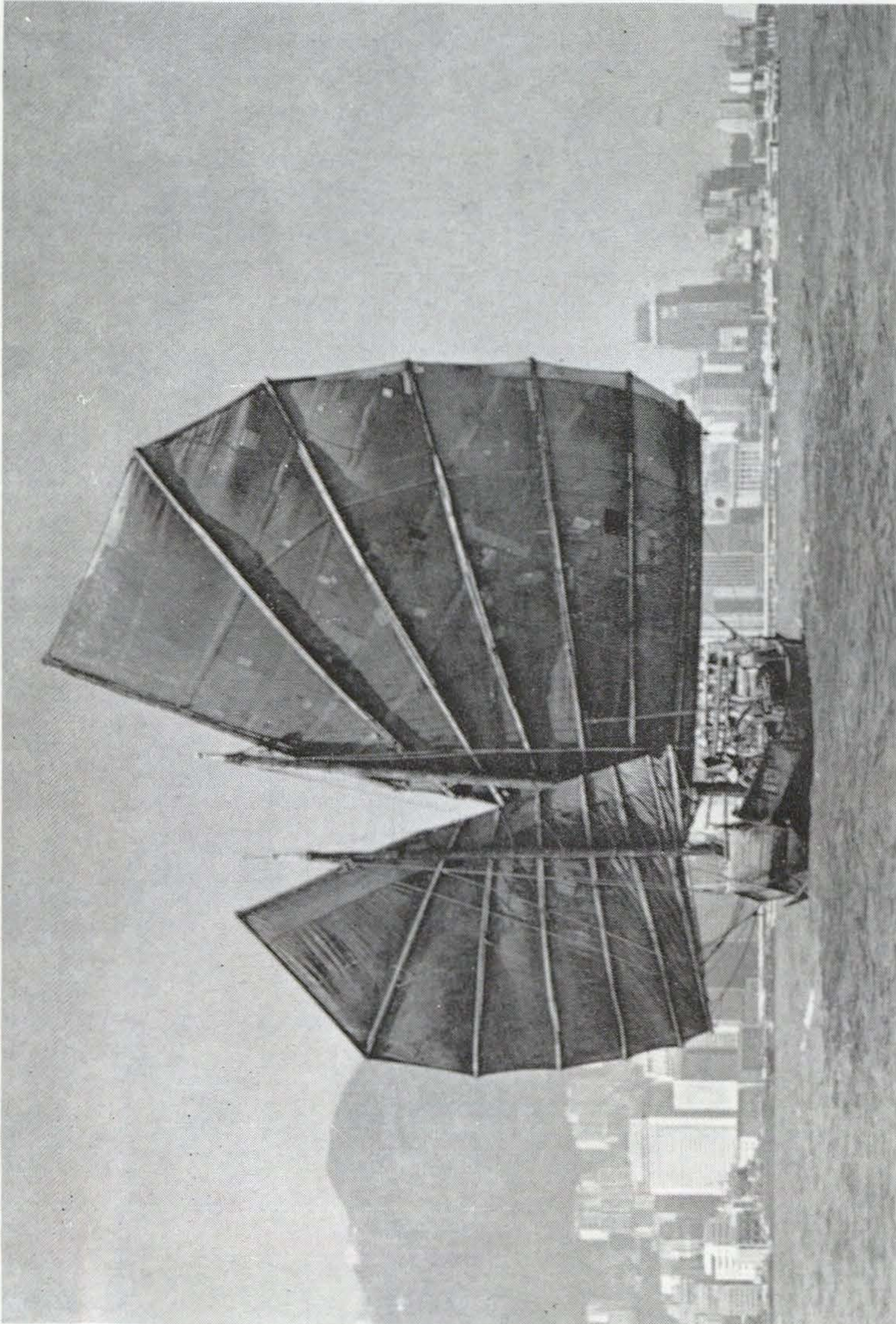
As already mentioned, the Chinese sails always used to be made of palm frond mat, the battens being made from green bamboo poles. Now in the book "CANOES OF OCEANIA," Hadden and Hornell noted that some people of New Guinea and Papua, when they wanted to sail would cut down a palm "leaf." Splitting the stalk in the centre and putting the two cut halves at the outside, the fronds were then woven to produce a rectangular sail which they put erect on their canoes.

From a study of all the numerous sail types described by Hadden and Hornell in their book, I believe that the Chinese developed their sail by tying

several of the primitive mat sails together, primarily to get extra sail area but this evolution would also explain the development of the multiple sheet.

The Westernised chinese lug

The most advanced Chinese lug is found at Hong Kong. It has therefore surprised me that Col. Hasler should not have copied it but took a primitive type for imitation. According to Warrington Smythe's book, "MAST AND



Hong Kong Junk

SAIL IN EUROPE and ASIA" the Hasler example could have been taken from the Penang rig of Malaya. There are three main points of difference:—

1. The Hong Kong rig is set on a stayed mast whereas all other Chinese rigs do not use stays. This feature, is most important for any sea-going rig because with a mast in constant movement, it must fatigue in the end unless it is a freshly cut tree of considerable size. Even with the unstayed Chinese mast, however, I suspect that the halliards were taken down to the weather side as was the practice of the Cornish lugger, which also had an unstayed mast. Doing this prevents the mast from waving about.

2. The second point where the Hong Kong sail differs from the Hasler copy is in the plan form. This more nearly approaches the semi-ellipse and has a lower centre of effort.

3. Finally, the third point. The main fault of the Chinese lug is that the sail sets far too flat in light winds where most flow is wanted and is too full in strong winds when a flatter sail is required, though of course the easy reefing makes this last item of little importance. The Hong Kong sail is far less "balanced" than the Hasler sail and therefore the battens bend in far lighter winds. Balancing the sail, i.e., having more area before the mast, reduces the load on the sheet but this is of little importance with good cordage.

Conclusion

If anyone wants to have a Chinese-type balanced lugsail on their boats, the stayed mast, the plan form and setting of the sail should be taken from that of Hong Kong and not from other areas.

Before deciding on any Chinese sail, however, consideration should be given to the semi-elliptical "squaresail" which should be just as easy to reef as the junk sail and be far more efficient than the modern Bermudian rig.

COL. H. G. HALSER'S RIG ON ILALA

Described by R. M. Ellison

ILALA is one of the first of the Nicholson 36 fibreglass hulls which were moulded by Halmatic. The hull was delivered to Fox of Ipswich who completed the yacht to suit the owner's requirements for a world cruise.

The rig and self-steering gear were designed by Col. H. G. Hasler for the yacht and a Kelvin diesel engine with fuel tanks giving a powered range of about 500 miles was installed aft. The owner required the rig to be easily handled and does not enjoy going onto the foredeck to change headsails. The cruise was not planned to include long passages to windward and the engine was to be used in periods of calm.

The design gave *ILALA* a schooner rig using two unstayed masts. The mainsail was the same area as the normal cruising mainsail for the class and the foresail equalled the cruising genoa. The mainmast was stepped in the same position as the other yachts in the class so that she could be converted back to the conventional rig if required.

In order to support the mast without stays a step was constructed into the hull and massive laminated deck beams are carried across the cabin deckhead. Bulkheads are provided to stiffen the hull. A special aluminium plate is bolted on top of the cabin top and foredeck and the masts are secured through these plates with soft wood wedges. The masts are hollow and made from six strips of wood glued together. They are very thick but reasonably light in weight. Each mast has a masthead fitting to carry halyards and boom topping lifts. There is an electric light on the foremast masthead wired inside the mast and an aerial for the radio transmitter is fixed inside the mainmast. There are no other mast fittings.

The foresail was similar to the only sail carried on Col. Hasler's own yacht *JESTER* at that time. The sails were flat, supported at the head by a yard and at the foot by a boom with stiff bamboo battens at about 30 in spacing between. About 9 in forward from the leech of the foresail, a sheet



Mike Ellison in ILALA

was fitted to each side of the boom and each batten while on the mainsail only one sheet was provided for the boom and each batten. The sails were hoisted to the mastheads by means of a three sheave purchase from which the halyard led through a block at the foot of the mast to the cockpit. In each case the yard was held to the mast by a stainless steel hoop bolted about $\frac{1}{4}$ of its length from the luff. Each batten was held to the mast by a loose

terylene rope tied to it forward of the mast, passed through a length of plastic pipe and round the mast with its other end secured to the batten again. The batten pockets were left open on the port side by the mast and the battens protected with plastic pipe which rubbed against the mast. Each batten had a downhaul for use when lowering or reefing the sail. These were joined together and led to the cockpit.

The foresail sheets were led through sheaves on the port and starboard side decks and then aft to the cockpit. On the mainsail the number of sheets was reduced by joining the line from the top batten through a spacer to the second batten. A third line connected this spacer to the spacer on the line joining the third and fourth battens so leaving one rope from the bight of this as a sheet. In this way the mainsail was controlled by two sheets which lead through blocks on the aft guardrail to cleats on either side of the cockpit. Because of the number of lines it was not necessary to use sheet winches.

From the masthead, fixed boom topping lifts were fitted on each side of the sails leading to two positions on the boom. These held the sail in position when lowered or partly lowered which is the position when reefed. Spare halyards were carried to the mastheads and a rope ladder was carried to be hoisted if required.

When bamboo battens were used with the thicker part forward and the wind was on the port side so that the sails were blown clear away from the mast they took quite a reasonable curve. The sails could be trimmed parallel without twist by the various sheets. On the starboard side the battens are pressed hard against the mast and the part of the sail forward of the mast tends to curve to leeward.

On *ILALA* by 1964 when she was kindly lent to me for the Observer Atlantic Race the bamboo battens in the mainsail had become brittle and were replaced with polythene pipe for the race. The pipe proved too bendy in strong winds and too brittle when banging against the mast during calms. The original mainsail had a tapered leech, the foot being 15 feet and the head 16 feet long. This taper was given so that the sheet from each batten could hang clear of the one below it. When I replaced the sail in U.S.A. the new mainsail was made parallel at 15 feet and 1½ in square ash battens were obtained. These were interchangeable and it was not necessary to carry so many spares. None of the battens broke on the return voyage but we did use the engine during calms.

During the race the foremast broke off about five feet above the deck during a period without wind but with a very rough and confused sea after a violent storm. During the storm I kept a small amount of sail on the foremast because during the early increase of wind the bronze eye of the main halyard block had chafed through on a stainless shackle at the masthead so that the mainsail had furled itself.

In my opinion the advantages of the rig on *ILALA* were as follows:—

1. The fully battened sails could be released at any time and they did not flog, the yacht could be controlled at reduced speed as a result. This is an advantage with any full battened sail.

2. With the wind free the sails could be goose-winged giving a good area with the risk of accidental gybing greatly reduced because the full battens and numerous sheets keep the sail flat, and the sail is partly balanced.

3. The foresail could normally be handled without leaving the cockpit including hoisting and reefing so that it is never necessary to go onto the foredeck to change a headsail; a great help in heavy weather. No alterations need be made to the sheets when tacking.

The disadvantages which I observed:

1. Unstayed masts do not seem able to stand in extreme conditions.

2. Length of rope. When sail is hoisted or lowered it is necessary to handle great lengths of rope, i.e., the halyards through their purchases, the downhauls and sheets. These lines were all stowed neatly in boxes but care was needed to prevent their being washed out and trailing astern in heavy weather. Every rope secured to the sails or battens had to be secured with a bowline and its end seized. If this was neglected they came undone, usually at night. Fitting a new sail was a long job.

3. Windward performance. *ILALA* was very heavy. The foremast, 50 fathoms of chain and two anchors forward were balanced by the engine and fuel aft. There was nothing to compare her performance with but I was disappointed with her windward performance, particularly when the sails were against the masts. She seemed to stop for every wave instead of driving through the water. During the return voyage she averaged just over 100 miles daily, about $4\frac{1}{2}$ knots over 3400 miles.

4. Chafe. As the sails are only loosely attached to the masts they are free to move through a considerable distance. The running rigging was longer than the standing rigging of the Bermudian rig.

GALWAY BLAZER sailed by Bill King has a rig designed with the experience of *ILALA* available but the problem of the unstayed mast in the open ocean still seems to be with us.

Note—*ILALA* now has the foremast removed and the mainmast has a Bermudian rig, she is for sale by Moody for Mrs. Barrington.

AYRS MEETING

“Yachts for the 1968 Single-Handed Transatlantic Race”

On the 18th July, 1967, a meeting was held at the Naval and Military Club in Piccadilly, the Chairman was H.R.H. Prince Philip, Duke of Edinburgh, K.G., P.C., C.B.E., F.R.S.

The Programme was made up as follows:—

- 1 Chairman's opening remarks.
- 2 John Morwood speaking briefly on the race.
- 3 Speakers. These were Angus Primrose, Michael Henderson, Michael Ellison, Bill Howell, Arthur Piver and James Wharram.
- 4 Chairman's closing remarks.

The meeting was an outstanding success and some very good points were raised especially by the designers present. Twelve months later when the time for the race came round only one of the speakers, Bill Howell, crossed the line as a starter.

The speeches of Angus Primrose, Mike Henderson and Arthur Piver are covered fairly comprehensively as their content is of interest to all members and they have not been given elsewhere and also in Piver's case gives a clear idea of his ambition.

THE SINGLE-HANDED TRANSATLANTIC RACE

by Angus Primrose

c/o Deacon's Boatyard, Bursledon, Southampton

Quite apart from the honour of being asked to speak at a meeting that is chaired by His Royal Highness, as a yacht designer I find the whole concept of trying to devise a boat that can be driven across the Atlantic faster than its competitors, without exception one of the most absorbing commissions that I have ever had, and am particularly pleased to have had the chance to work with their respective owners in the design of *CYMRO*, *AXEL HEYST III* and another as yet un-named 50 footer (named *KYTRA II* later), all of which I hope will be at the starting line for the next year's race.

Nowadays, with the spotlight so frequently turned on highly specialised class racing yachts, the job of a yacht designer is very largely that of getting inside the appropriate rule and trying to cheat it. Please don't misunderstand me. I believe this to be a perfectly honourable and useful thing to do. It does, however, tend to confuse one's thoughts about the basic principles of sailing yacht design and improvement.

As a yacht designer, therefore, I welcome and enthuse very sincerely this exciting new development in the sport of racing sailing boats offshore.

As a designer one must have some definite and precise instructions to work to—that is essential—the clear cut challenge of trying to design the best boat for a particular client to sail alone across the Atlantic in the shortest possible time—these are fascinating elemental problems. Quite apart from any other consideration such as hull design and so on, I am quite sure that the owner—or perhaps you might even call him the “jockey”—must first and foremost be happy with his boat. To really race a boat on one's own for this distance, this psychological factor *must* be of tremendous importance, and unless one has properly interpreted the character of the person for whom one is designing, it is unlikely that she will succeed.

The problem therefore becomes really absorbing. Not only must one rack one's brains about what really are the factors that make for speed in all weather conditions, sea kindliness and general fitness for purpose of all gear and equipment, but also and throughout the whole design one must try very hard to create a boat that will appeal—a boat that the “jockey” will feel happy about. It would appear from what I have heard that in the case of Sir

Francis Chichester my former partner John Illingworth and I failed rather sadly in this respect—I only hope that in the three boats now built or building for this race I have been able to understand my owners better!

Before I sit down I would also like to draw attention to another and even more important aspect of what this race is doing for yachtsmen generally, I have been privileged to know Col. Blondie Hasler for many years now, and when he conceived the idea of this race I am sure that the main factor in his mind was to try to stimulate and improve the breed of cruising boats. Highly prejudiced as I am—I nevertheless believe that this is happening. Undoubtedly there will be an awful lot of hullabaloo and not a little nonsense talked and written about this next race, but sailing men generally can be grateful to the instigators and present organisers—not to mention the actual competitors—for, arising from all the thought, effort and money that is currently going into preparing yachts for the 1968 Single Handed Transatlantic Race, we shall all be able to learn a very great deal more than we know at the moment what really constitutes a good, able, and easily handled cruising boat.

Many boats are being built especially for the race, but it is my firm conviction that because of the basic simplicity of the rules, the boat or boats that really do well will be superb cruising boats, and the ideas and practices developed for the race will be of inestimable value for people of all types, shades and convictions, who in the future just want to go cruising on the high seas. Already when one looks around the harbours and coastlines, one sees really large numbers of ordinary cruising yachts fitted with vane steering gear—and what a boon this bit of apparatus is to the enjoyment of sailing. But were it not for the impetus given to the development of vane steering gears for single handed racing, I doubt very much if we would have available the quality of Vane Gears that there now are.

By the same token, by the impetus given by the “glamour” of the race, people are now going to the best specialists—the best professionals—and saying to them “will you work for me in developing a really good boat for this race.” Inevitably, a lot of good ideas must come out of it all, and in two or three years’ time the chap who just wants a simple little boat to potter over to Brittany for his summer holiday with the wife and kids will, if he wants, be able to draw on the fund of knowledge that is now being built up by these increasing numbers of apparent “cranks” who are prepared to pit their strength and stamina against others just to reach America before the next man.

Our little cruising man may not want—or may not be able to afford a *PEN DUICK*—but from the details of any of the other competitors, there will be items of tremendous value and use to him.

I have apologised earlier for talking from a prejudiced position but finally and with all sincerity and speaking as an ordinary person who for some indefinable reason enjoys “just sailing,” I think we all owe a very profound debt of gratitude to the people who first thought of this race—who continue to organise it—and of course to the chaps who actually go sailing in it. The outcome of this next one is going to be jolly interesting.

YACHTS FOR THE SINGLE-HANDED TRANSATLANTIC RACE

by Michael Henderson

The Single Handed Transatlantic Race is a very interesting problem for the designer, because there are virtually no limitations imposed by a Rating Rule (which, perhaps unfortunately, has led to its becoming a competition somewhat controlled by the availability of sponsorship) but there are several special limitations imposed by the very nature of the Race itself. It is thus a very challenging problem. It obviously resolves itself at the design stage into the making of a decision between a multihull or a single hull boat, and in my view, the multihull has not yet reached the stage in its development where it is capable of being raced, i.e. driven hard, by one man for 3,000 miles; almost entirely because of the limited range of stability imposed by the multihull configuration. These boats are at the beginning of their development as racing machines and possess, I submit, serious weaknesses in this particular context of single handed transatlantic racing. They are, one must accept, capsizable. They are, moreover, particularly susceptible to capsize when being driven to the limit, and we are this evening discussing boats which must be capable of being so driven.

Offshore racing in multihulls, at the present stage of their development, is more akin to bull fighting, motor racing or mountain climbing, in that it demands a continuous concentration on the part of the participants if the full potential of the boat is to be realised but disaster averted. A boat that demands such concentration is not a boat that will win a single handed Transatlantic Race; at any rate, not in my hands! Nevertheless it must not be denied—it cannot be denied—that very many successful ocean passages have been made in multihull boats; and there are several people here tonight who can speak to that very convincingly indeed. There is however, a world of difference between a cruising passage and a race; especially a long single handed race. The multihull offers numerous possibilities for exciting and demanding offshore racing for trained and experienced crews, but I cannot see that in 1968 it will be possible for one man to drive one across the Atlantic to win against the Chichesters and Tabarly's of this world.

Therefore, I have proposed as my entry for this race a very different sort of boat; a long, narrow, pretty light displacement, single hulled boat, with reasonable draft and ballast; one which, if necessary, can be snugged down and left to herself while I retire to the comfortable amniotic darkness of her after cabin. I am sure that one must be able to retire to the womb occasionally in a Race of this kind.

The boat is designed round the notion that one must be prepared, not only for quite a long period of windward work in heavy conditions, but for between a fifth and a third of the mileage in light to moderate airs. Fortunately we are not tied by any Rating Rule and so the rig can be quite elastic. I have given the boat a fairly conventional masthead sloop rig with the forestay well inboard, and with a slightly experimental roller reefing genoa; (I can't go all the way with Colin Mudie's idea of carrying a whole series of paper

genoas); plus heavy weather staysails which are stowed permanently hanked on to twin stays in a self draining sail locker on the foredeck. For dealing with light weather conditions she sets a large light weather ghoster from the stem head, and also a rather "Illingworthy" mizzen mast and its windage. Sail areas are approximately 1,000 square feet maximum in the working rig, which is increased to something like 1,800 with the light sails.

The Hull form is fairly straightforward, and is to some extent a development from my experience with catamarans. It incorporates a knuckle in the forebody, which is intended to provide adequate reserve buoyancy in the bow to cope with the chance that we may have a bit of hairy running, while still maintaining the fine sections near the waterline, so important for speed to windward. The final details of hull form and particulars of fin area and section will be subject to tank testing.

I propose to try two slightly out of the way, devices; the first is a pair of trimming tanks, one at the bow and one at the stern; the object of which is to give me some control over the fore and aft moment of inertia of the boat; it would appear that the proper matching of pitch frequency to rate of encounter has an important bearing upon windward ability; therefore it seems to me worth investigating the use of some device to give this control. The other, and perhaps, more doubtful device, is a means of increasing sail carrying power by the hoisting out to windward of a spar bearing on its end a faired ballast tank, which at the appropriate moment is pumped full of, say, 40 gallons of sea water. This gadget has at least the advantage over more conventional means of attaining straddle stability that it can be fairly quickly jettisoned and does not incur any more than windage drag.

Finally some statistics—the boat is 48 ft waterline, 53 ft overall, 10 ft beam and displaces $6\frac{1}{2}$ tons, with a draft of 7 ft 6 in. Her ballast ratio is around 40%, and she has, as you can see, a fairly pronounced fin and rudder profile (a model of the boat was shown). She will be steered by a development of my running line vane gear, leading to a tiller in the cockpit, linked to the rudder stock.

I must make it plain that this is only a project boat for the Race, at this stage. I am still eagerly searching for a sponsor (I can't possibly afford a boat of this size myself) and am aware that it's about a year too late to find one. Nevertheless I hope that this brief exposition has given you food for thought.

To paraphrase a good friend of mine, "Boats are like women and horses; if they're any dam' good, they're the devil to handle." It is my intention that this beast will be pretty dam' good and only a tiny bit of a devil to handle.

AYRS JULY, 1967

by Arthur Piver

This is our third visit to England, and as before we find it charming. We do have the Americans' usual difficulty in becoming accustomed to taking tub baths instead of our usual shower baths. When I take a tub bath I

feel I should have a rinse cycle—like a washing machine . . . and then be spun dry!

We have fun with English place names. These can be long and involved—and apparently are never pronounced as they are spelt. When we received word that the new trimaran factory of Cox Marine was located at Brightlingsea we were most curious as to how it was actually pronounced. Bright-ling-sea; the word seemed straightforward enough—but could not possibly be pronounced as it was spelt. So we formed the habit of pronouncing it Biddle-snoop—finally convincing ourselves we had somehow stumbled upon the correct manner of saying the word. After our arrival here we did visit Cox Marine at Biddlesnoop. Do you know how those people pronounce Biddlesnoop? . . . Brightlingsea!

The Crystal Trophy Race marked the second time this year we have given up ocean racing. The first occasion was during the Sydney-Hobart Race. In order to win we in *VIVA* had but to sail 200 yards within 45 minutes—but the wind failed and it took 2½ hours to travel that pitifully short distance. After a late start in the Crystal Trophy Race we rounded both the Nab Tower and the Cherbourg Buoy neck and neck with (the 45 ft catamaran) *PELICAN*; were just astern of her after she rounded Wolf Rock when the tide turned and the wind disappeared. It took us many hours to round the Rock, following which we drifted becalmed for ten solid hours. Boats which rounded Wolf Rock eight hours astern of us beat us to Plymouth. I'm thinking of taking up farming. The awarding of cash instead of the usual yachting trophies was a surprise to us. The £60 we received has been well utilized.

Established sailors know that the way of the Sea and ships is inviolable, unchangeable, and therefore unarguable. This they have learned through centuries of bitter experience and billions of salty predecessors. Such a belief amounts to a veritable religion. It is, however, not entirely correct. It is correct as regards the ballasted sailboat—but does not necessarily apply to the modern versions of the unballasted outrigger types.

A significant fact in the rapidly-growing trimaran movement is the proportion of these boats which make actual deep-sea voyages. Whereas it is the norm for once starry-eyed owners of ballasted craft to stay resolutely near home after testing the local ocean in vessels originally purchased for romantic voyages to the South Seas and elsewhere, almost without exception the trimaran builder (or purchaser) puts to sea. The less exposure (in monohulls) he has had, the more likely he is to go cruising. This lack of experience is of course questionable unless he has extensively tested his trimaran—but this type has proven more forgiving of general ineptitude by beginning sailors than are ballasted craft of occasional lapses by experienced mariners. Hundreds of ocean crossings have been made in our designs—with a safety record which is unprecedented. These boats have proven so safe it may be said that we have designed a good deal of the adventure out of cruising under sail. If you don't run into anything, and have enough sense to reduce sail area as the wind increases (much laughter)—I am not referring to Bill Howell's recent capsize in his 43 foot catamaran—it is hard to see how you can come to grief.

On our recent transatlantic trip in *STILETTO* we had for the first time an effective wind vane. We found we had much free time, and the importance of having suitable companionship was obvious. In these easily-handled boats you don't need a crew to work the ship; nor do you require a series of helmsmen. You therefore need mostly just good company. We reiterate our former recipe for ocean cruising—a self-steering device—and A Wife. We use the words “A Wife” advisedly—for, after all, one of the most important elements is latitude—and we are giving you more latitude.

The differences between this new sailing and the old sailing is far greater than the difference between monohulls and multihulls. The basis for the crucial difference is ATTITUDE TOWARD THE SEA. Western man has traditionally feared the sea, and regardless of his love for his vessel has respected it to the point of apprehension—wishing his ship to be of “husky” construction in order to act as a fortress protecting him from the perils of the mighty, merciless ocean. This fundamental fear has been engendered over centuries of sailing ballasted craft which has tempered him with its limitations.

Because of this basic apprehension we are little concerned with established sailors, for their reluctance to accept differences in cruising sailboats prevents them from applying new handling techniques in stressful conditions which can be safe and more comfortable in a trimaran but which could be virtual suicide in ballasted types. An example is the handling of multihulls in boisterous downwind conditions. The established sailor is baffled by the fact that this type can surf away before an overtaking wave, avoiding cresting combers which the slower ballasted boat must accept. Deep-sea waves steepen prior to breaking, and the addition of gravity to sail area causes the light multihull to surf down the forward slope; away from the break. Conversely, if the trimaran must claw off a lee shore, the considerable stability keeps the sails upright where they can hold the wind, and the thin slicing hulls cut through wave-tops, going to windward as never before achieved. We have carried full mainsail (and working jib) in such conditions in up to 60 knots of wind; with the most important technique consisting of not allowing more than a certain amount of heel by means of feathering. The light craft can assuredly be stopped by a breaking wave, but will assume forward sailing immediately in a rapid fire sequence; this in conditions in which a ballasted boat with sufficient sail area to go to windward at all would be knocked flat and find it difficult—sometimes impossible—to force its considerable bulk to move ahead until conditions ease.

Instead of looking toward established sailors to man our trimarans we instead look toward Youth, which is growing up with multihulls all about and regard them as normal to the yachting scene. We look forward (in America) toward the burgeoning clan of surfers (for we are more surfers than sailors), for to the surfer the sea is a great big playground and a monstrous wave a thrill and a challenge. This is the attitude of the Polynesian, who believes Man always has a chance with the sea, and we surf delightedly in huge combers which might intimidate non-surfers. We believe good multihull sailors must also be surfers—or at least understand the general principles.

Our trimarans are but extensions of our surf-boards, and we choose to regard the sea as an ally rather than an enemy to be feared and battled.

YACHTS FOR THE 1968 SOLO ATLANTIC RACE

by Michael Ellison

Michael Ellison likened the race to a lottery, the more tickets you buy in one and the more feet of waterline length of the yacht you enter the better your chance of winning. At the same time everyone has a chance of winning. One yacht can spend three weeks in a flat calm when no amount of waterline length can help against others not so far away that have a breeze.

Ellison also repeated his fear of collision with shipping during fog and stressed the importance of reliable but not necessarily expensive navigation equipment. He warned against expecting rich returns for sending reports to the newspapers. In 1964 he sent daily reports for which a national newspaper paid the full expenses of the transmission, supplied the radio and £40.

For the 1968 race Mike Ellison favoured a catamaran and explained his reasoning as follows:

“The basic object of the exercise is to transport one man and his necessary equipment to Newport as quickly as possible, there is no prize for transporting lead but to work efficiently the mast must be kept upright. This can be done by having a narrow yacht with deep draft and heavy keel. The weight can be reduced by increasing the beam. This enables us to have better sheeting arrangements for the sails but increases the wetted surface area or we can go one stage further and increase the beam until no lead is needed and then reduce the wetted surface by lifting the centre out of the water and calling the result of a catamaran.”

A WORLD CRUISING YACHT

by James Wharram

James Wharram gave an interesting speech on his experience in heavy weather and his plans for a voyage, not single handed or non-stop, round the world. He discussed handling multihulls in storm conditions and stressed the importance of keeping the weight low down in the hulls and the advantage of having a clear deck on a catamaran with no raised cabin over the centre deck to give resistance. He favours open slats to let any water which comes on board to drain away. His ideas are given in other AYRS publications including numbers 59, 60, 63 and 64.

YACHTS FOR THE 1968 SINGLE HANDED ATLANTIC RACE

by Bill Howell

Bill Howell spoke of his capsize in *GOLDEN COCKEREL* and the lessons he learnt from this. His experience of the 1968 race are recorded in publication number 67 and the conclusions on the capsize are covered in publication number 63.

AN AYRS MEETING HELD AT CAXTON HALL ON 1st APRIL, 1969

On Thursday, 1st April, 1969, an extraordinary social meeting of AYRS was held at Caxton Hall in London under the Chairmanship of Roger Gresham Cooke, M.P. The subject was the 1968 Single Handed Transatlantic Race. H.R.H. Prince Philip had kindly agreed to be Chairman but was prevented from coming by illness.

The evening was opened by our founder and editor John Morwood who, in his opening address emphasised how essential self steering gear is for the race and gave various facts about the race. In particular he noted that:—

1960 5 entrants— 5 finished, average boat length 27 feet,
average time 55 days.

1964 15 entrants—14 finished, average boat length 33 feet,
average time 44 days.

1968 35 entrants—18 finished, average boat length 55 feet,
average time 38 days.

1st *SIR THOMAS LIPTON* sailed by Geoffrey Williams in 25 days.

2nd *VOORTREKKER* sailed by Bruce Dalling.

3rd *CHEERS* (the proa) sailed by Tom Follett.

There have been no fatal accidents in all three OSTARS, although Arthur Piver went missing in the qualifying race last year.

Following the introduction, the Watney Mann film entitled "SINGLEHANDED TRANSATLANTIC 68" taken by Colin Forbes from the trimaran *STARTLED FAWN* was shown. This is truly an excellent film and Manns have made it available to yacht clubs and any others interested. The film includes shots of many of the competitors preparing for the race, the finish at Newport and some shots of competitors in heavy weather. Colin Forbes said a few words about it and his frustration during the long periods of calm which he experienced.

SINGLEHANDED TRANSATLANTIC 68

A film record of the Observer Singlehanded Transatlantic Race of 1968—the third to date—was commissioned late in 1967 by Watney Mann from Colin Forbes (Anchor Films Limited). The result is “SINGLEHANDED TRANS-ATLANTIC 68.”

Colin Forbes's job is film-making, sailing is his hobby. Subsequent to the film being commissioned Colin Forbes was offered the opportunity of himself competing in the race, sailing the trimaran *STARTLED FAUN*, loaned to him by her builders, Cox Marine Ltd., of Brightlingsea.

Thus a vital element of interest was added to the film—shots of conditions experienced by the lone yachtsman in mid-Atlantic. Furthermore, as a competitor, to use his own words, he could “better understand the problems involved and capture the mounting excitement of the pre-Race days in Plymouth, the tension of the start, the overwhelming loneliness of a mid-Atlantic

gale, the exhilaration of a fair wind, the frustration of a flat calm and the sheer joy of making a landfall."

This 4-yearly yachting event, sponsored by The Observer and organised by The Royal Western Yacht Club of England, has done more than any other to increase the speed, safety, ease of handling and development of ocean-going yachts and may well have played a part in encouraging Sir Francis Chichester and Sir Alec Rose to undertake their solo voyages round the world.

In the 1968 event, competitors from nine nations sailed boats costing anything from five hundred to many thousands of pounds; their designs were even more varied, ranging from the revolutionary proa, *CHEERS*, through catamarans and trimarans like *STARTLED FAUN*, to the more conventional monohulls like the winner, *SIR THOMAS LIPTON*. In fact, however, the race did little to resolve the multihull/monohull controversy. Out of 35 starters, only about half reached Newport, Rhode Island. World attention was focussed on the event as never before, owing to the widely publicised air/sea rescue dramas involving the two amateur-designed craft, *YAKSHA* and *KOALA III*, which proved inadequate when subjected to the stern judgement of the Atlantic. From a technical point of view, however, failures are no less important than successes in fulfilling the real purpose of this race—to stimulate the design of increasingly efficient ocean-going craft and gear.

Colin Forbes has paid tribute to the splendid co-operation of many other competitors who, both before and after the race, placed themselves and their craft at his disposal for sequences essential to the film as a whole.

The hope is that this film—an unique record of a major yachting event seen through the eyes of a competitor who lays claim to no special skills as a sailor or a navigator—will appeal not only to the great and growing numbers of people who already enjoy "messing about in boats" but will also encourage to try their hand at sailing those who have not yet discovered its exhilaration. 16mm colour optical sound film. Running time 35 minutes.

The film was followed by speeches by Lt. Leslie Williams who sailed Number 9, *SPIRIT OF CUTTY SARK*, B. Howell who sailed the catamaran *GOLDEN COCKEREL*, Brian Cooke who sailed No. 3, *OPUS*, Eric Willis who sailed the catamaran *COILA*, No. 8 and Noel Bevan who sailed No. 6 *MYTH OF MALHAM*.

Leslie Williams, No. 9, Spirit of Cutty Sark

Lt. Leslie Williams, who sailed the Gallant class 53 foot fibreglass sloop *SPIRIT OF CUTTY SARK* spoke on the service rendered to yachting by sponsors without which designers would not have the opportunity to produce new ideas and seaworthy fast boats. His own association with his sponsors was extremely happy but he thinks that sometimes after a sponsor puts out publicity, a competitor tries to squeeze a bit more money which causes discord. In Lt. William's opinion all the British competitors who stood a chance of winning were sponsored.

He noted that:

"There were many reasons for doing this race. Some people wanted to win, some people wanted to make films, some people wanted to drink beer. There have been rumours that people go sailing single-handed to get away from their wives. Whatever the reasons are, I think it's good to have a secondary object in view of the fickleness of the sea and the fact that you can never be sure of winning. If you go on with just the one objective in mind you're going to be terribly hurt if you don't win."

"In order to have a secondary object I chose to sail a glass reinforced plastic boat which was the largest G.R.P. boat in the world and my idea was to fit this boat out with British gear and British equipment on the best cost effectiveness basis and really use this thing as a sort of export platform and try and do some good in this respect and at the same time taking part in the race."

Noting that his second object was most successful Williams mentioned an Ocean 71 for the next race but would like to go all out to win for which purpose he said he, with Geoffrey Williams, would like a 100 foot staysail schooner with no sail larger than the 860 square foot genoa that he had on *SPIRIT OF CUTTY SARK*. He thinks boats for the race will get bigger and bigger and would prefer a moderate displacement rather than light.

Of the race itself Leslie spoke of his emotions and the trouble with his arm which he injured while on his qualifying trip. In the race, he knocked it again so that he could only carry reduced sail for four days. He was overtaken at this time by Bill Howell whom he described as "My friend the great Australian 'Toothwright'." A large whale came very close and gave him a fright and his most memorable event was the storm.

All the competitors seem to have been caught by this storm, some worse than others. Lt. Williams disagreed with the positions of the yachts in the storm as shown in the film as he thinks that the others were to the south and the storm did not hit them so badly. As he experienced the storm, it was more than force 10 and he felt that the wind was something in the order of 90 knots. His Brookes and Gatehouse anemometer was off the scale throughout and did not record less than 60 knot maximum even rolling between the waves. It was the worst storm that he has ever experienced and only after his vane steering washed away and his yacht ran downwind gybing wildly could he get the storm jib down.

After the storm Leslie had a phase of disappointment when he realised that Geoffrey had gained 400 miles. He couldn't really win with a long beat to windward into fog with the ice of the Grand Banks. He sailed into the ice channel in fog and was becalmed for a day during which the ice patrol spoke to him and warned that ice was all round the South and West horizon. When the wind came, the fog closed in and he sailed through hoping for the best and recorded in the log that he was frightened.

From the ice he made reasonable progress to about 100 miles from Nantucket light when he tacked and tacked but got headed all the time with periods of calm and mist during which Geoffrey Williams, Bruce Dalling and Tom Follett finished.

Brian Cook No. 3 'Opus'

Brian Cook described *OPUS* as one of the small boats in the race with a modest sail area of 600 square feet which he could carry in winds up to force 6. This proved very economical in the number of sail changes so that he only had to make 31 changes.

In common with other yachts *OPUS* has twin forestays which he found extremely labour saving and sail handling wasn't any real problem. He had fitted reefing points through the eyelets at Plymouth using 8 in lengths of $\frac{1}{2}$ in terylene line.

"*OPUS* is a conventional monohull, heavily built with fairly heavy displacement." When the wind got a bit fresh he put a shock cord onto the tiller. During the whole race *OPUS* ran for only eight hours in three spasms. Under these conditions the spinnaker tried to take charge and the steering gear did not control the course made good. For 24 hours she steered herself without the steering gear after a failure. In general she liked a good breeze.

Brian Cooke had great confidence in his yacht and she survived a knock-down during the freak storm. During the storm he wrote in his log "I'm jolly glad I'm not in one of those multi-hulls just now." He had a hand anemometer but at the worst of the storm it got more water in it than wind. It was the worst storm he has ever experienced but he felt unable to guess at a wind strength above force 8.

Everything possible was done to keep *OPUS* moving as fast as possible; each hour the skipper went to sleep but he also inspected the set of the foresail at one hour intervals except during the storm. There were a number of books on board but sailing the yacht was a full time job and they remained unopened. All repairs were done immediately they were noticed and he had three hot meals each day. There were purple hearts on board but he didn't use them!

Things were kept dry by two methods. Medical supplies, fireworks, electrical equipment he stowed in Tupperware type containers bought from Woolworths with silica gel to keep them dry. Recording tapes were stowed separately as they must not be stored with silica gel. Clothing, flags, bedding and like things he stowed in heavy gauge plastic bags of the type used for 28 lbs of coal. These seemed to withstand the constant chafe. The tops were rolled over and after squeezing the air out, the corners were rolled and secured with clothes pegs. A "space" blanket was carried in preference to an ordinary blanket.

Quite a lot of trouble was experienced with the rigging. Six days out one of the two halyards winches broke off and the foresails had to be hoisted with a pulley. The second halyard winch broke off after 28 days when *OPUS* was only 300 miles from Newport, sailing against a force 5 breeze. The judder of the breaking winch broke the fitting at the masthead so that the twin forestays and the big genoa, which was set, fell partly on deck and partly overboard leaving the mast completely unstayed forward above the hounds.

The mainsail was immediately lowered and this caused very heavy rolling. The first thing to hand was the spinnaker halyard and this was set up as a forestay on the anchor windlass. The foresail halyard was set up using a sheet winch and next the mainsail was hoisted leading the main halyard

under the roller at the stemhead and back to the mast. A fourth stay was formed by setting a foresail flying.

This rig proved rather inefficient in the prevailing conditions and *OPUS* could only make 60° to 70° to the wind. After 48 hours the wind moderated and the stays were reconnected at the masthead which Brian Cooke reached by means of a rope ladder which was hoisted (with a bucket of tools) on the main halyard. The yacht was put on a beam reach with the big genoa set flying in order to prevent rolling as much as possible and minimise pitching.

OPUS carried an off course alarm based on a repeating magnetic compass. The maximum limits which could be set were 30° either side of the set course or 50° one side and 10° the other. It could be set to given limits and worked very well. It was most useful in light weather and gave warning of wind shifts.

No chronometer or deck watch was carried but time was kept by a "PETER" battery-operated electric clock which cost £7 10s. 0d. the same type as used by Michael Ellison in the 1964 OSTAR race. The daily rate varied by a few seconds but it was adequate enough when augmented by frequent time signals. The clock was purchased nine months before the race and the rate noted each day. Nearer the race an electric wrist watch was purchased for £17. This was made by Saga and marketed by Timex, it was worn throughout the race and return passage without any harm and kept time to within four seconds a day.

Eric Willis No. 8 Coila

Eric Willis began his speech with the statement, "I'm the one who didn't make it!" He was indeed very lucky judging from later accounts of his rescue which he described so vividly.

He had been lent *COILA* a 50 foot trimaran of 25 ft 6 in beam and with 960 square feet of working sail by Mr. Mungo-Campbell for whom he had designed the vessel. After five years' mental preparation for the Race, he sailed *COILA* down from Scotland for the start.

COILA's self-steering gear worked magnificently until she got to Ushant. On hearing of a gale approaching Willis changed course and "bolted off to the south-west. Doing 18 knots, 'nose down tail up' with the wind vane whipping smartly round, and the vessel hitting the bottom of the trough broadside on," Willis said he did not find it very comfortable. Here he dumped the self-steering gear overboard keeping only the wind-vanes. Using an arrangement of two pieces of elastic on the steering cords *COILA* held a course at round about 32 degrees off the apparent wind at all speeds and Willis was able to sleep the whole way apart from occasional sail changes which he reckoned numbered about eight a day. Willis says the longest he went without touching the helm was 18 hours. He had no running and states that he lost about five days with calms and storms and only had to steer for four hours.

Willis slept most of the way, pumped occasionally, ate well (with the result that he put on weight!), read little except pilot books. His "five star hotel," as her owner called it, even had a clothes drier.

Only one day's weather seems to have been "average," but whilst Eric was sleeping he suffered his only damage when he awoke to find the 500 foot Genny had fallen over the side complete with forestay, but he was able to rig up another one using spare halliards. The boat, when surveyed later in the States, had nothing wrong.

Using three different radios, Willis was able to keep track of the positions of the other boats in the Race.

When *COILA* was in a position west of the Azores, news was received over the radio that the hurricane was going north of Bermuda but it certainly didn't seem like that to Willis. However, he decided to go on as long as he dared.

"The seas were appalling, there was no direction to them whatsoever. They were standing up in heaps rather like pyramids 30 feet high all around; a lot of the tops were falling off. The air smelt absolutely burnt, there was very little wind in the middle, but surprisingly enough she was still dry on deck."

"Anyway I got in the other side and that was draughty. The Brookes and Gatehouse equipment was stuck on the 60 knot stop all day, hard, and I wrote one or two remarks in the log about wishing I hadn't done it. Let me stop at this stage. I have pretty strong theories on how these boats should be handled in heavy weather and in one of the very heavy line squalls (I misjudged it; thought I was really coming into it and it was too late to go back), I slung two 100 fathom ropes, one over each bow, with five fathoms of chain, mizzen up and lay to this and she lay really beautifully, but it took five hours to get it in afterwards so I didn't do that again! I was exhausted winching that lot in."

"In the second lot, I strapped the mizzen in (full mizzen) as hard as I could get, as tight as I could get it, down the middle of the boat. Everything else down. Helm lashed down hard and let her lie and she would occasionally fall off and immediately drive herself up again, the bow of the weather float just occasionally pierced the top of a wave and somehow or other *COILA* seemed to go through the groove behind it still virtually dry."

"Then it eased and I got under way again and then it blew up again in a sort of second line which was quite nasty. I was fed up. So I took everything but the mizzen off and retired to the bunk and went to sleep."

Halifax radio reported that the weather was easing so Willis wrote in his log "sails up later and meal in the meantime." This was the last entry in the log for the next thing Eric remembers is a launch coming alongside and a shout at which he rolled out of the bunk. He has no real recollection of what happened next but is only able to piece together what he's heard since. Apparently, Eric Willis had picked up a bacterial infection and although semi-conscious, had been able to call up Halifax radio with an estimated position. A second call from him had been made with a correction of position and Halifax had told him to stick on the line. However, he went off to his bunk. It took only four minutes from the time the message was passed from Halifax to Boston for a full-scale search to be launched. Two para-medics involved with the Apollo Space Programme were flown in thick

fog, sighting only the orange fluorescent paint on the deck from 60 feet altitude. They jumped straight through the fog into the sea and swam to *COILA*, after locating her by her radar reflector, administered medical treatment to the skipper using their comprehensive medical kit which had dropped into the sea in the fog. A submarine recovery vessel homed in on *COILA*'s transmitter to pick up Willis, put the trimaran on a 600 foot line and towed her to Portland, Maine with a crew on board who even tidied up the vessel and "didn't drink my whisky."

Noel Bevan No. 6 Myth of Malham

Noel Bevan said that the performance of his boat was magnificent. She never gave a moment of worry and the only important failure was a mast spreader which came off. He experienced the same depression as the other competitors when his home made anemometer was on its stop. He made the instrument by using turned off ends of cigar tubes for the cups.

The rigging failure caused the spreader to fall with a patter onto the deck one night after the storm. He had tightened the top shrouds which kept getting slack but he couldn't find out the cause of the slacking. The spreader fell out because the bolt securing it had broken and the rigging came slack again. The loose rigging was caused by heavy steel thimbles stretching out and becoming long and thin. Next time he plans to use a mild steel plate with a hole through the middle as designed for sailing ships in the 1800's.

In the storm he started off by running before the wind, towing all his warps astern. Chafe parted this warp and he finished up lying a hull which *MYTH* seemed to like perfectly.

Self steering on *MYTH OF MALHAM* was by the Max Gunning gear which worked magnificently and Noel Bevan did not steer the boat much at all. He liked the facility of changing vanes which was partly done because they were undecided on the size of vane to use for *MYTH* in the beginning. The longest vane extension was seven feet and worked in the lightest of airs. The procedure was to reef the sails and the vane at the same time. When he unreefed the sails, he set a larger vane. All sail and vane changes were recorded on magnetic tape. The only steering gear failure was due to a flaw in a casting which was like a honeycomb.

Equipment

Noel Bevan is very interested in gadgets and had in the past a hate for battery charging by petrol engine. He does not like the noise and the time it takes. For the race he made a thermo-electric battery charger by using a device made for cooling the other way round. He applied heat to one side and got amps out instead of putting amps in and using it as a small refrigerator. This did not work very well because the parts were not designed for the purpose. An American firm made one up and flew it over and it worked. A Taylor paraffin cabin heater gave 10 watts of charge a day with only the reassuring hiss of the Primus burner.

He kept the Taylor stove going for 17 days and it was arranged to use one can of fuel every 24 hours. Following the injection of the can of fuel he would replace the cap and pump like mad, a system which worked very well.

He also enjoyed sitting in front of the stove to dry out on the only occasion that he got wet.

On the return voyage Noel Bevan thought of other methods of battery charging which would make use of the vessel's motion. He thinks a yardstick would be 10 lbs of equipment weight per watt of battery power as the best obtainable. This is based on a monohull and has been checked on a computer simulating various vessel's movements and sea states.

For radio, Noel Bevan used radio telegraphy and was full of praise for the G.P.O. and Portishead radio staff. He used code because he could give a cable message, vessel's position, speed, wind, everything else, state of owner, state of boat all in 10 letters in two groups of five. With the address it made seven words.

As an off course indicator *MYTH* had what Noel Bevan described as a crude magnetometer which he brought and demonstrated to the audience. This is a little electric device which he described as being able to look at the earth's magnetic field and when it is lined up it doesn't do anything but as soon as you deviate from the setting it starts to howl. This was one of his very good alarms which nearly drove him mad. The other alarm was a government surplus time switch and a large bell worked off 12 volts which was infallible.

For time keeping, *MYTH* had a quartz crystal chronometer provided by a Swiss firm which lost one and a half seconds in three months. It runs on two deaf aid batteries. This completed his list of gadgets and Noel Bevan concluded that the reception which he received in Newport was worth it.

Presentation of race awards

The Chairman, R. Gresham Cooke, M.P., informed the meeting that, in addition to the speakers, two of the foremost personalities of the race were present in the room and, without disclosing their names, he asked Mike Butterfield to tell the meeting how these two famous men were selected for the AYRS prizes.

C. M. G. Butterfield

"Mr. Chairman, sir; ladies and gentlemen; I don't think I will tell you exactly *how* they were selected, but I will tell you briefly as I can a few words about the background of these Awards.

"I was surprised when our learned Editor said to me last Sunday that he thought I should do this, and then he added "but you musn't take more than two-and-a-half minutes." I have quite a reputation for estimating time, and in the 1964 race I allowed four weeks for the crossing, and I was right—for the winner; *I* took seven weeks!

"As you have heard, even before 1960, AYRS was actively involved in the idea of this race, although in many sailing circles at that time, it was viewed with considerable alarm. But we do believe passionately in individualism and the expression of original thinking, as John has said, and we also are very interested in anything that will make a boat easier to handle or more efficient.

"We have I think in too many yachtsmen's minds recently been primarily associated with multi-hulls, and it's true that we are very interested in multi-

hulls, but this is only a very small part of what we are interested in, and probably our encouragement of the development of self-steering gear has been a boon to many a yachtsman who would not be so foolish as to sail out of the sight of land—but perhaps now we should concentrate more on the development of rubber bands!

“In fact, multi-hulls are not at all new. Samuel Pepys records that King Charles II sailed a catamaran up the Thames, and let us hope—maybe—that one day another royal Charles may do likewise.

“From a glance at the statistics of the first two races, it became obvious that in order to stand a good chance, a competitor had either got to have a specially built boat or a very large one. Now this obviously entails, as you have heard, something of a race within a race for commercial sponsorship. Now the Society is not at all “agin” commercial sponsorship, but we felt that the small boats still have got a great deal to teach us—we can learn a lot from them—and we wanted to continue to encourage their entries in this sort of boat as well, so, as you have heard from the previous speakers, lessons have been learned and *we* can learn from these crossings.

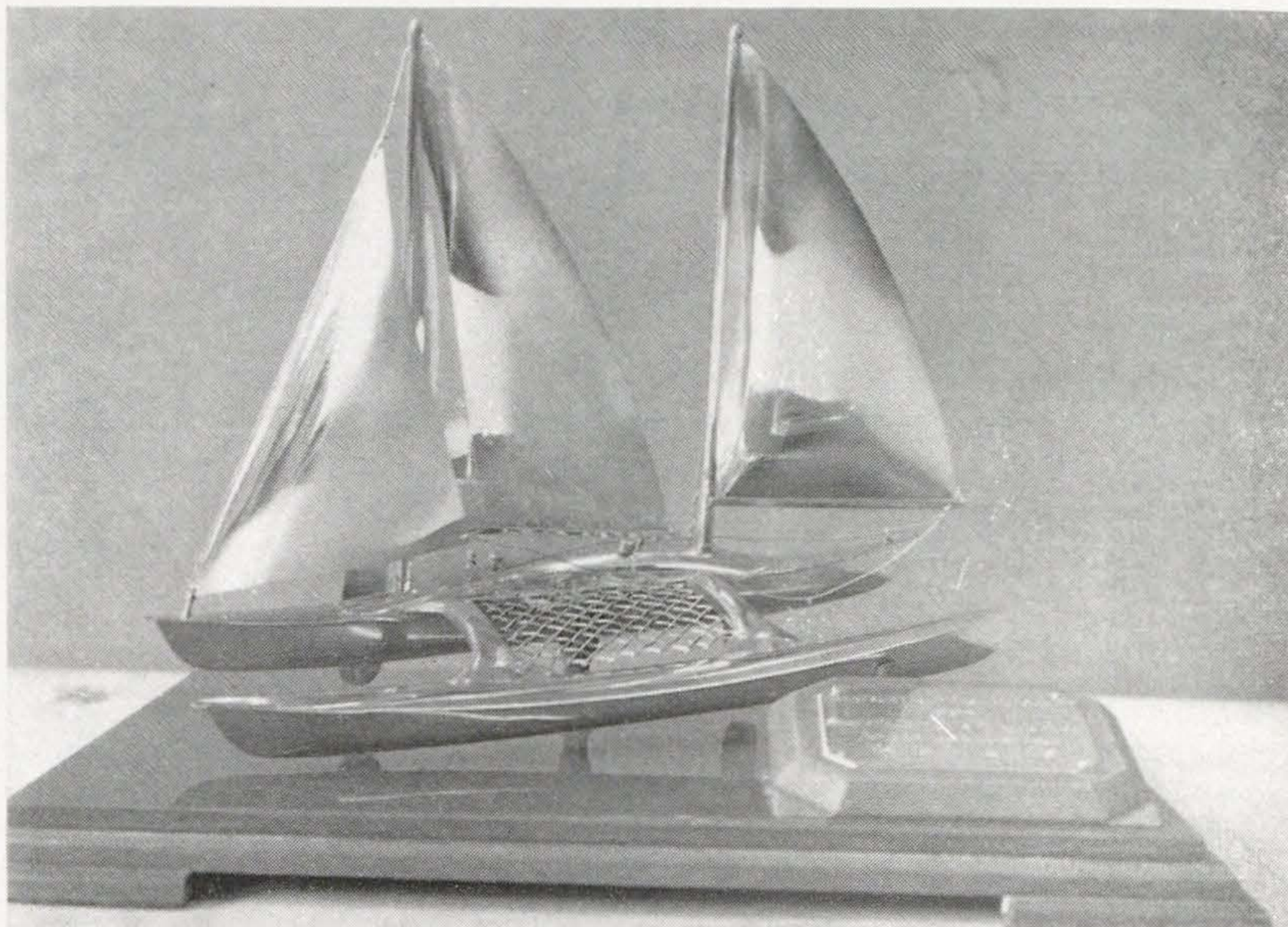
“So your Committee suggested that an award should be created *limited to non-sponsored entries*, and since the factor which most governs speed in these boats, apart from the tenacity and the efficiency of the crew, is probably waterline length, we decided on a somewhat woolly formula of handicap on the waterline length.

“We also felt that since we are a research society, we should have another award for the competitor who in our opinion made the greatest contribution to research, providing that in so doing, he also managed to finish the race. In the event, our forecast proved fairly accurate. As you have heard, the average size of yacht starting has increased between 1964 and 1968 from 33 ft to 55 ft. In 1964 there were only two boats specially built for the race, and I would hazard a guess that together they probably didn’t cost more than £8,000—and who knows how much was spent on this last race?

“In endeavouring to make the awards worthy of the achievements of our Society, we were very greatly helped by two of our members—Robert Leach provided the Award for the Handicap, and Raymond Blick very skilfully made a beautiful model for the Research Award—and they both did this at considerably less than the cost to the trade, and I think we should be very grateful for their help; and also silversmith Norman Burrridge for the use of his workshop and his advice.

“Now as the majority of people present are all practical sailors, you will readily appreciate the achievement of our Handicap Award winner. He had a boat only 19 ft, a mere 16 ft on the waterline, and he completed practically the same course as in 1960, and he did it in a time less than the winner for 1960—namely, 40 days.

“The winner of our Research Award appears to have a much bigger boat, but if you look at the model, I think you will see that the accommodation was not much larger than the average sized dog kennel; and unperturbed by statistics from the first two races, which showed that competitors taking the Azorean route had always finished tail end in the fleet, he decided to sail the extra 800 miles, and as you have heard, he took only just over one day



Ray Blick's model of *CHEERS*

more than the outright winner, *SIR THOMAS LIPTON*, finishing in 27 days, 13 seconds, beating the previous record set up by Eric Tabarly—who knows how few days he might have taken if he had preferred ice skating to sun bathing?”

The Awards were then presented to the two winners by John Morwood. The AYRS Handicap Prize for the fastest non-sponsored entry was awarded to LT. GUSTAV BERTIL ENBOM of the Swedish Army, who sailed the yacht *FIONE*, a 19 foot sloop.

The AYRS Award to the competitor making the greatest contribution to research was presented to TOM FOLLETT of the U.S.A., who sailed the yacht *CHEERS*, a 40 foot proa designed by Dick Newick.

LETTER

R. GRESHAM COOKE

Flat 36, 35, Buckingham Gate, London, S.W.1.

Dear John,

During the meeting on the Single-Handed Transatlantic Race, one of the Speakers told us that in the height of the hurricane there was a smell of burning in the troughs between the huge waves.

I know that this amazed many of the hearers including myself. In the book by Frank W. Lane, “THE ELEMENTS RAGE,” Vol. 1, page 54, the author gives a description of tornadoes in which he says:—

“Lightening sometimes plays about the funnel (of the tornado)

After this it is not surprising to learn that strange sulphurous odours (ozone?) are sometimes emitted by tornadoes. This most probably comes from the lightening. (See Scientific Monthly—August, 1933).”

I realise, of course, that tornadoes are not the same as hurricanes but one can accompany the other—so I have been wondering if our heroic friends were plagued by a tornado as well as a hurricane!

Roger Greshame Cooke

RESULTS OF 1968 OSTAR

The following table shows the starters with columns to indicate the final position.

Age in 1968	Name	Craft	Position	Type
25	Geoffrey Williams	<i>SIR THOMAS LIPTON</i>	1st	Mono 57' Ketch
29	Bruce Dalling	<i>VOORTREKKER</i>	2nd	Mono 50' Ketch
	Tom Follett	<i>CHEERS</i>	3rd	Proa 40' Schooner
36	Lt. L. Williams	<i>SPIRIT OF CUTTY SARK</i>	4th	Mono 53' Sloop
42	Bill Howell	<i>GOLDEN COCKEREL</i>	5th	Cat 43' Ketch
47	Brian Cooke	<i>OPUS</i>	6th	Mono 32' Sloop
	Capt. M. Minter-Kemp	<i>GANCIA GIRL</i>	7th	Tri 45' Ketch
49	Noel Bevan	<i>MYTH OF MALHAM</i>	8th	Mono 40' Cutter
	B. de Castelbajac	<i>MAXINE</i>	9th	Mono 35' Sloop
	Jean Yves Terlaine	<i>MAGUELONNE</i>	10th	Mono 35' Sloop
	Lt. N. S. A. Burgess	<i>DOGWATCH</i>	11th	Mono 27' Sloop
35	Andre Foezon	<i>SYLVIA</i>	12th	Mono 36' Sloop
30	Lt. B. Enbom	<i>FIONE</i>	13th	Mono 19' Sloop
	Claus Hehner	<i>MEX</i>	14th	Mono 37' Sloop
39	Rev. S. Pakenham	<i>ROB ROY</i>	15th	Mono 32' Ketch
	Ake Mattsson	<i>GODWIN II</i>	16th	Mono 19' Sloop
	Bernard Rodriquez	<i>AMISTAD</i>	18th	Tri 25' Cutter
	Michael Richey	<i>JESTER</i>	19th	Mono 26' Chinese Lug
	Colin Forbes	<i>STARTLED FAWN</i>	17th	Tri 33' Sloop
	E. Tabarly	<i>PEN DUICK IV</i>	Rtd	Tri 65' Ketch
	Eric Willis	<i>COILA</i>	„	Tri 50' Ketch
	Alex Carozzo	<i>SAN GIORGIO</i>	„	Cat 53' Ketch
	David Pyle	<i>ATLANTIS</i>	„	Mono 27' Ketch
	William Wallin	<i>WILECA</i>	„	Mono 27' Sloop
	Comdt. B. Waquet	<i>TAMOURE</i>	„	Tri 26' Sloop
	Fr. E. Baumann	<i>KOALA</i>	„	Tri 30' Sloop
	Robert Wingate	<i>ZEEVALK</i>	„	Mono 40' Sloop
	S. A. Michael Pulsford, R.A.F.	<i>WHITE GHOST</i>	„	Tri 30' Schooner
	Egon Hienemann	<i>AYE-AYE</i>	„	Mono 31' Sloop
	Guy Piazzini	<i>GUNTHER</i>	„	Mono 38' Ketch
	Sandy Munro	<i>OCEAN HIGHLANDER</i>	„	Cat 45' Sloop
	L. Paillard	<i>LA DELIRANTE</i>	„	Mono 36' Sloop
	Joan de Kat	<i>YAKSHA</i>	„	Tri 50' Sloop
	M. Cuiklinski	<i>AMBRIMA</i>	„	Mono 37' Sloop
	Alexander Welsh	<i>HERA</i>	N/Start	Mono 26' Cutter
	Laurie Osborne	<i>GENESIS</i>	„	Tri 32' Cutter
	Alan Gliksman	<i>NEPTUNE</i>	„	Mono 60' Yawl
	H. Garreta	<i>VIF ARGENT</i>	„	Mono 42' Ketch

There it all is—a stark summary of all the sweat, brains and courage which went into the 1968 Atlantic Race.

Lots of us will count noses and draw conclusions, the mono-hullers finding ample support for their arguments, whilst the multi-hull enthusiast will take heart from his reading of the final results.

The various designs and the equipment carried by the finishers will be of great help to future designers and manufacturers but the probability is that it has little of interest to members. It is just possible that Williams had in *SIR THOMAS LIPTON* a craft stronger and heavier than it need have been but we shall never know without a detailed study. Our wealthier members may be tempted to fit a computer but the average member wants to know what he can economise on, to save money.

The second half of the above list would appear to be a better field for inspection, plus the fact that mistakes and accidents are given more publicity. From our point of view, this can mean vital information. It is fair to say that Bill Howell's warning re multi-hulls not to secure sheets so that they cannot release at the critical time, must be considered and De Kat must have made many a home builder think again.

A more detailed study of the retirements might give us food for thought and this follows below.

There were 19 retirements and non-starters. There are remarkably few serious lessons to be learned when the overall picture is to hand. The importance of careful preparation and trials was, however, once again demonstrated by the failures.

Eric Willis in *COILA* had wretched hard luck by being taken seriously ill about 100 miles from the coast of America, but his craft arrived in wonderful shape. It is difficult to cater for illness although one does hear the subject discussed with some apprehension from time to time. Probably Eric Willis underlines the fact that remarkably few people are let down by ill health.

SAN GIORGIO, *ZEEVALK*, *WHITE GHOST*, *OCEAN HIGHLANDER*, *YAKSHA* and *AMBRIMA* suffered damage and *TAMOURE* could not go on without planned communications.

The rest appeared to have retired for other reasons probably not entirely connected with their craft. Tabarly's retirement remains a mystery but he must have had very good reasons for his final decision not to go on for "the hell of it." His trimaran was untried and had little time for preparation.

Alex Carozzo in *SAN GIORGIO* retired damaged, presumably this being normal wear and tear damage. Again, this was a gallant, last-minute effort which left no time to test any of the many alterations made the day before the race started. *SAN GIORGIO* looked to be a very fast and able catamaran with many excellent and original ideas built in and it is a great pity that her arrival at Plymouth by merchant ship was delayed to such an extent that sailing trials before the start were impossible and she was unable to show her paces during the race.

Robert Wingate in *ZEEVALK* retired with a leak. She was 19 years old, so maybe old age caught up with her.

M. Pulsford damaged *WHITE GHOST's* float very early on and could not complete the repairs in time to make a race of it. There is no doubt that

hanging floats on a multi-hull is a difficult business. The experts take it very seriously and it would seem that a little more work and discussion between ourselves might be time well spent.

In *OCEAN HIGHLANDER*, Sandy Munro was dismayed. Apparently a type of plain insulator was fitted which, when it broke, left Sandy without a backstay. In the correct type in normal use the two wire splices interlock, separated by the insulator, which is kept in compression. If the insulator fails, the two eye splices join and the stay remains intact a few inches longer than before. The only answer seems to be to stand over the workmen. They do not like it but too much sloppy work is passed as satisfactory. One can reasonably spare a tear for Sandy Munro.

I suppose De Kat and *YAKSHA* are legends now. Perhaps the least said, soonest mended.

AMBRIMA sank under M. Cuiklinski. This appears to be retirement in the extreme. At these times a multi-hull is a great blessing.

The one fact which emerges is that time spent in preparation is seldom wasted. Sir Alec Rose did not have a lot of money to spend on *LIVELY LADY* but he is known to be a careful man. It would seem that care comes first, together with intelligent use of resources.

Unfortunately, if you cannot find a rich sponsor and buy care and fine equipment and you have other demands on your time, then errors will creep in.

The Royal Western Yacht Club in the rules for 1972 have increased the importance of the 500 miles qualifying course by making sure that the craft being sailed in the race is the one which completes this 500 mile cruise, and not only the person sailing it, who could in 1968 have sailed in a different yacht. This is to be as sure as possible that the yachts starting on the race will be better prepared than some in previous races.

As said earlier, the race makes little contribution to the Mono-Multihull controversy. It is an interesting thought that if the money could be found to build a *SIR THOMAS LIPTON* standard multihull, would it decisively sweep the field and prove that monohulls are only winning because the betting is on the known stable? A glance at the casualty list in the 1968 race would seem to show that a limited purse, limited time and potty ideas are not enough to ring the bell. However, some of the successful yachts have shown how these three problems can be overcome by meticulous care in preparation.

SINGLE-HANDING AN OPEN-ENDED BUDGET

by Anthony Churchill

Reprinted from Yachting and Boating Weekly

After the 1968 race Geoff Williams wrote a book about his adventure with *SIR THOMAS LIPTON* and he wrote to his rivals asking for answers to some questions for inclusion in his book. One competitor (unnamed)

filled in serious answers for Williams, but penned a few frivolous answers for Anthony Churchill.

Q. Daily position?

A. Sitting in the cockpit.

Q. Any breakages?

A. Two cups and Aunt Edith's present from Brighton.

Q. Did you have any views about sponsorship in this race?

A. ****!

Q. What type of wet-weather clothing did you wear?

A. Waterproof.

Q. If you were entering a race with an open-ended budget in 1972, what type of boat would you choose?

A. Well, I've never sailed an open-ended budget.

Q. A number of competitors have said they woke up when they were in real danger. Did you notice that?

A. No. I was too far away.

Q. Would the boat steer without self-steering?

A. Yes, if you used the tiller.

Q. Have you any recommendations for improving the race in 1972 (particularly pre-race and start)?

Well, the answer to this is not printable, but it had to do with every boat being in Millbay before the race, for scrutiny . . .

I hope Geoff takes this in good part. The Singlehandlers I met were to a man, people of character and determination. Geoff's book looks— from these questions, to be a soul-searcher on the race, and invaluable to future organisers.

THE OSTAR SELF STEERING GEARS

by John Morwood

I cannot say that I saw all the self steering gears on all the boats. Some boats were not in the Mill Bay dock at Plymouth and some who were there had not rigged their gears. The numbers I saw were as follows:

Hasler gears: 9.

Quartermaster: 4.

Henderson: 2.

MNOP: 6.

Gunning: 1.

Other: 4.

Surveying all these gears, the enormous size of the vanes used with the vertical axis of rotation was apparent, compared with the tiny vanes used by the French MNOP gear, with a horizontal axis of rotation. The second thing which struck me was the amount of bits of string and quadrants about the

place with the "paddles" and grooved large pulleys. They may all work but the engineering is surely weak compared with the ruggedness and simplicity of the MNOP.

The MNOP gear

This gear is a development of the gear used by *PEN DUICK II* in 1964. A small vane is pivoted at its lower edge in two bearings allowing it to rotate only around a horizontal axis. The movement is limited to 30° on each side of the vertical and a counter balance weight only just holds it up when there is no wind, though it can be locked vertically and allowed to weathercock.

At the bottom of the vane, a small lug is put on one side to which is attached a vertical rod which moves up and down when the vane rotates. This rod is bent so as to pass down through a hole in the disc on which the vane bearings are mounted and there is a ball and socket joint at its lower end. The disc, vane and the whole upper part can rotate around a vertical axis quite freely by a ball race on the disc, thus allowing the vane to weathercock. This is the system which we called the "Morwood" gear in our book *SELF STEERING*.

In operation, when the disc is fixed in position, the vane movements cause the ball and socket joint at the lower end to move up and down. The edge of the disc has teeth into which a latch can be pulled to fix it in position when the yacht is on course and it appears that considerable skill has to be used to set the exact course one wants by this method. Obviously the MNOP men have not read our book or they would have had flanges at the edge of the disc to give easy and fine course setting, even allowing the boat to be completely steered by a couple of lines wrapped around it.

The up and down movement of the ball and socket joint is simply converted to rotation in a vertical axis by a bearing placed at an angle of 45° on the vertical auxiliary rudder stock.

All the MNOP gears used an auxiliary rudder, except for *PEN DUICK IV* which has a trim tab on her transom hung rudder. It was vibration in this system which caused *PEN DUICK's* gear failure and not to any intrinsic faults in the vane side of the gear.

The Gunning gear

This is fitted to *MYTH OF MALHAM*, a yacht of the immediate post-war years of light displacement and a fine racing record with the RORC. The Gunning gear is the only one so far, except for the MNOP gear to use a horizontally pivoted vane. It is described fully in our latest book on *SELF STEERING*. Though not as well engineered as the MNOP gear, it has the following advantages:—

1. The vane can easily be replaced. *MYTH* carries no less than 7 vanes. Some are simply replacements but various sizes are used according to the wind strength, for instance a very large and light one is used for drifting conditions.

2. The vane actuates a "paddle" servo as in one of the Hasler gears, whose side to side motion works the main rudder through lines.

3. The "paddle" of the Gunning gear does not work the main rudder through a quadrant at the top as with the Hasler system. Instead, two chains are attached to it just above the waterline (one on each side). These run up

to the top of the transom at the sides, become converted into lines which pass through blocks to a jamb cleat on the tiller. This method produces far less unsupported length for the "paddle."

The Rodriquez gear

Bernard Rodriquez, on his 25 foot Dart Trimaran, *ARMISTAD*, used a "Moving Carriage" gear, with the essential part crossed wires on two drums, instead of meshed gears. With a vertically revolving vane actuating a trim tab set well back from his rudder, he had no trouble with his gear on his Atlantic crossing from New York to Plymouth.

A commercially manufactured self steering gear

In my opinion, the time is now ripe for the mass production of self steering gears. The amateurs and the semi-professionals have now brought self steering with gears to a state where the maximum power of the wind is multiplied by a water servo to steer our yachts with the moving carriage to give fine and easy course-setting.

The MNOP gear already has what I think is the best moving carriage (Morwood gear) but the disc should have flanges and be controlled by two lines with a turn or so around it. The vane should be easily replaceable by vanes of large size for drifting conditions.

The MNOP usually controls an auxiliary rudder and this will surely work well except in very light winds. If, however, some means is arranged so that the auxiliary rudder becomes a "paddle" and actuates the main rudder by lines for light winds, the range of self steering would be the best possible. This could be done either by swinging the whole gear as in the Gunning system or by having a universal joint in the auxiliary rudder stock and only swinging the lower part.

The surfing multihull

When a multihull shoots ahead with the wind and sea astern, surfing on a large wave, its speed may exceed that of the wind so that the apparent wind comes from ahead and the steering goes haywire. In theory, a horizontally pivoted vane will still steer the boat in these conditions because, though the direction of the wind has moved forward, it will still act on the same side of the vane. No information on this is at present available but at least the alteration in apparent wind direction does not cause the yacht to steer wildly. An auxiliary gyroscopic gear could, however, be used alongside the main gear. A partial solution with vertically pivoted vanes is to lead a piece of shock cord forward from the vane which might keep it from flying aft when the apparent wind draws ahead.

Enquiries about the various gears should be sent to the following addresses:
Hasler Gears: M. S. Gibb Ltd., Warsash, Southampton.
Quartermaster Gear: H. K. Wilkes, Firlawn, Chilworth, Southampton.
Henderson Gears: M. Henderson, 34, Medina Rd., Cowes, Isle of Wight.
MNOP Gear: Eca, 10, Avenue du Chateau, 92 Bellevue, Paris, France.
Gunning Gear: M. F. Gunning, Little Hawsted, Steep, Petersfield, Hants.
Aries Gear: Marine Vane Gears, 37, Woodford Ave., Gantshill, Ilford, Essex.
Q.M.E.: 82, Durleigh Road, Bridgewater, Somerset.

CHEERS

Described by John Morwood

L.O.A.: 40 ft

Displacement: 3200 lbs

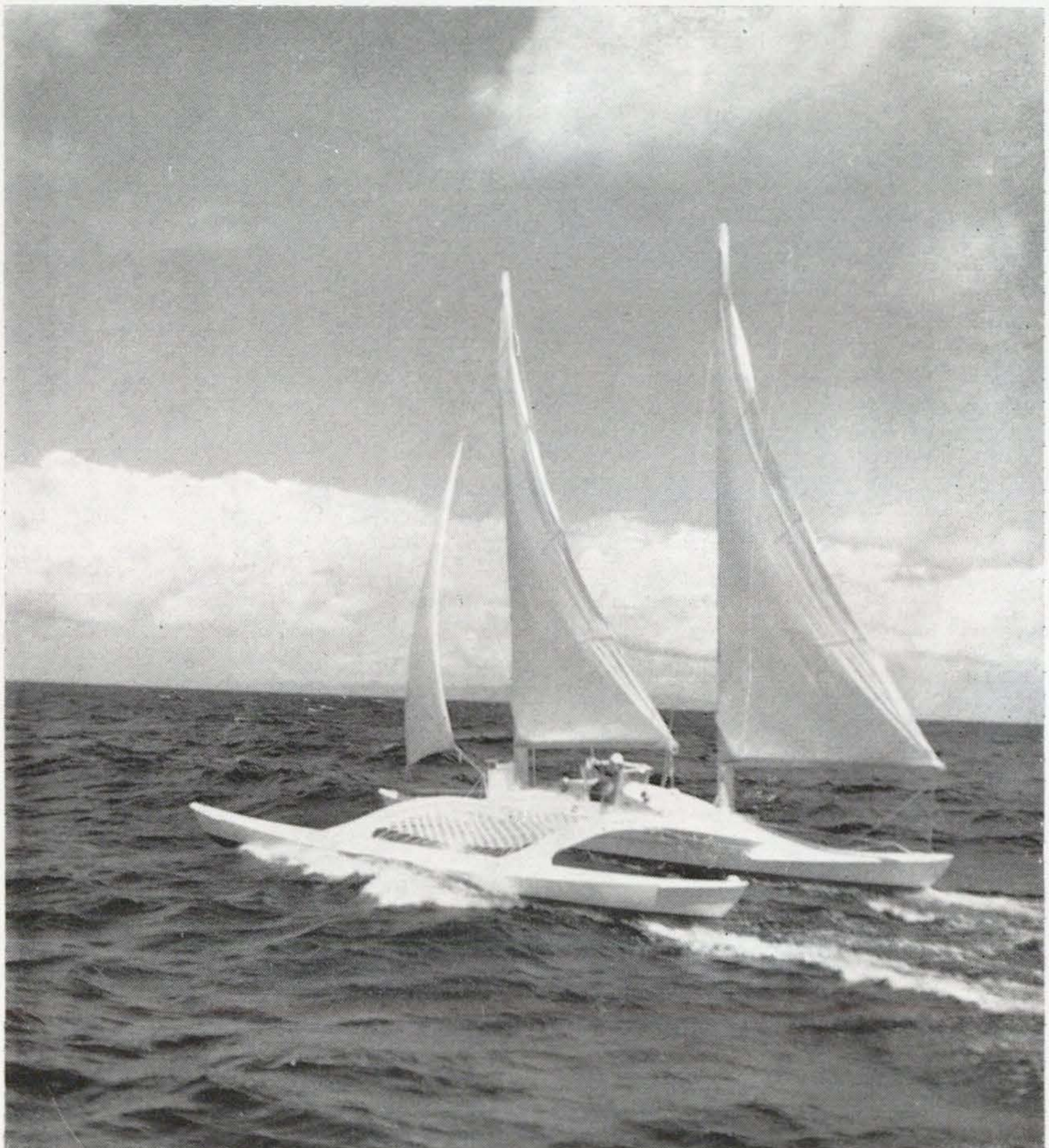
L.W.L.: 36 ft

Sail Area: 330-600 sq ft

Beam: 16 ft 8 in

Designer and builder: Dick Newick, Sea Rovers Inc., Box 159, Christiansted, St. Croix, U.S. Virgin Islands, 00820.

Perhaps, the most dramatic and outstanding concept in yacht design in this century is the amazing "Proa" *CHEERS*. When Dick Newick first wrote to me that he was going to enter a "Proa" in the OSTAR, I must admit that my heart sank a bit because I think that the traditional "Proa" is a dangerous craft. After all, the natives usually carry bows and arrows with them on



CHEERS at speed

long voyages and shoot each other if the craft capsizes or breaks up. I was not keen for that to happen to Dick or any crew he might choose—his trimarans *TRINE* and *TRICE* are far too well thought out and good for us to risk losing their designer.

Even when I saw *CHEERS* at Plymouth after her Atlantic crossing in $28\frac{1}{2}$ days, averaging 147 miles per day single-handed under the hand of her genial, bearded driver Tom Follett, I was only “impressed” by her design concepts.

Now, after studying the performance of the yachts in the OSTAR, one finds that *CHEERS* was the fastest boat of all for her length, even though Tom Follett spent almost three days near the Azores swimming in the calms and, in general having a lazy passage only putting about 30 times, reefing 7 times and changing foresails less than 50 times.

The fact is, that it takes time to assimilate new ideas and really to appreciate them. Perhaps I have been slow to take it all in. Perhaps I was put off by Tom Follett’s OSTAR philosophy—after all, the man who can argue whether to take 5 or 6 gallons of water to last him some 30 days has *the* race-winning idea.

But the more one thinks about it, the more one appreciates that *CHEERS* is an answer to some of the problems of sailing efficiency. Years ago, we showed the calculations for stability and wetted surface for all multihulls and proved that the “Proa” should be the fastest sailing craft of all. But this was on paper. Dick Newick has now shown that this is also true when built and also that the design is fit to cross oceans and endure storms.

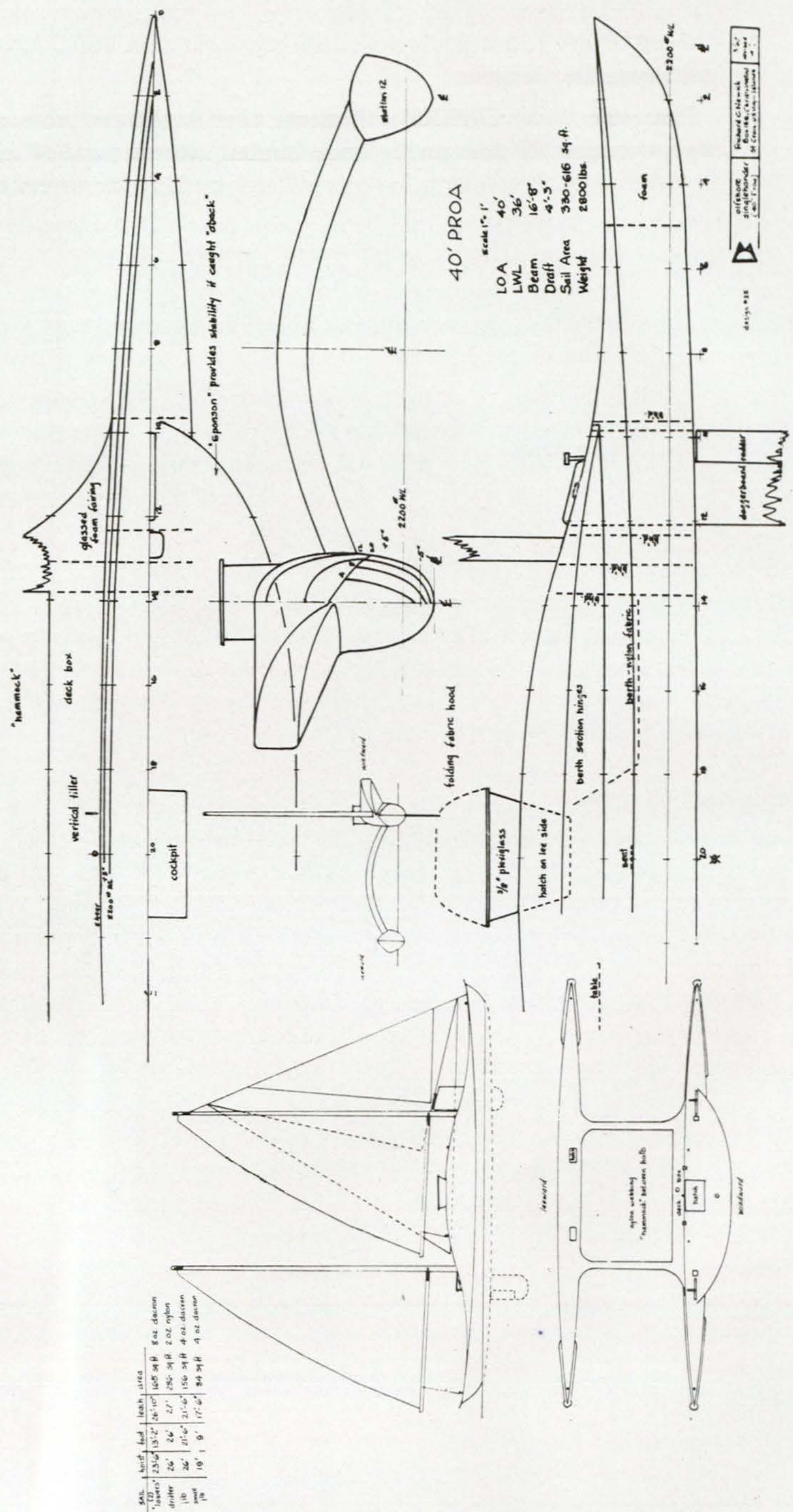
The design of Cheers

CHEERS is a “Proa” and therefore must be able to sail equally well with either end as the bow. To change tacks, she is stopped and sailed off backwards which seems cumbersome when written but is little hardship when tacking at sea. Even tacking up a narrow estuary thus is quite possible in my opinion, but *CHEERS* needs triple the room used by more conventional craft. I confess that my only experience with a proa is a trial in the Wellington dock of Dover Harbour. With our proa, if the manoeuvre were neatly done, the craft just swung through 90° as she stopped and sailed off on the new course.

CHEERS consists of two triple diagonally planked hulls made from the same mould, each hull being symmetrical about the fore and aft axis and also about an athwartships axis amidships, i.e., both ends are alike. The underwater sections are parabolic except for the extreme ends which are sharp at the keel.

These two hulls are connected by two box beams curved up in the middle so as to clear waves and the space between them is filled with a trampoline made from woven Dacron (Terylene) strips about 2 in wide with square holes about 4 in by 4 in in the mesh.

At first sight, therefore, *CHEERS* looks like a canoe-sterned catamaran. But the two masts and cabin are both on one hull and, if one looks closely, one sees two “Centreboards” fairly near the ends on the same hull as the masts and cabin. Actually, of course, each board has a small rudder on it



Sail	height	width	length	area
main	23' 6"	13' 2"	26' 1"	1605 sq ft
main	26'	26'	27'	256' sq ft
main	26'	21' 6"	21' 6"	156' sq ft
main	19'	9'	17' 6"	84' sq ft
main	19'	9'	17' 6"	84' sq ft

40' PROA

Scale 1" = 1'

LOA 40'

LWL 36'

Beam 16'-8"

Draft 4'-3"

Sail Area 330-616 sq ft

Weight 2800 lbs

design #18

offshore singlehander (40' Proa)

Richard Childwick
Boswell, Childwick
of Cross Creek - Boston



CHEERS at Mill Bay Docks

so that, if half lowered, it is a leeway-resisting board but, if fully lowered, the rudder appears and can steer the boat.

When sailing, the hull, with everything on and in it, is to windward (on both tacks). The other hull, which is to leeward only contains light stores.

The masts

Each mast is unstayed and has a sail track on its leeward side in which the sail is hoisted. No matter to which end of the craft the booms point, therefore, the windflow on the leeside of the sail at the mast is not "spoiled" by the mast thickness which should make for greater sail efficiency.

The sails

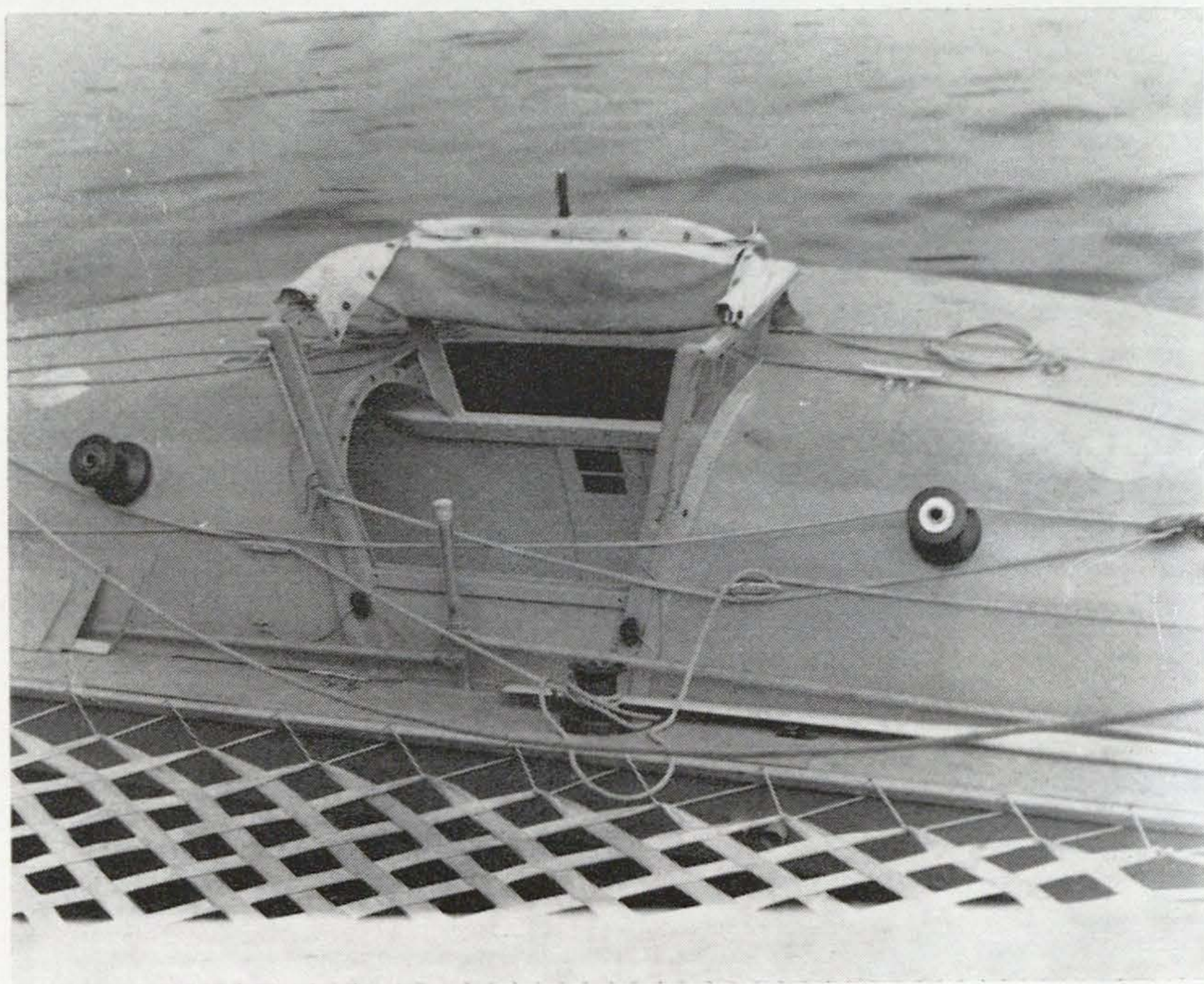
The two sails are of the usual Bermudian type set on booms with the normal gear. On each tack, one of three jibs can be set flying from the stem to the forward mast (which will be different for each tack, of course). Balance between sail area and lateral plane is achieved by varying the depth of the forward board, which also makes self steering possible without a wind vane. (*CHEERS* was the only boat in the race not to use a vane).

The sheets

These are arranged so that the booms can be pulled to either end of the boat to let her sail in either direction.

Sailing with Cheers

On the wind, the forward board is half lowered and the aft board is let right down to show its rudder. The tillers run to leeward and that of the aft board is connected via an extension to a variety of "Whipstaff" or vertical



CHEERS cockpit—Note "Whipstaff"

pole hinged at its lower end. This is beside the tiny cabin to leeward and will steer the boat. The sheets are pulled so that the booms are pulled aft, the sails fill and the boat sails off. The Genoa may but need not be set.

If one now wants to change tack, the sheets are let fly, the jib is lowered if it has been set and the boat stops. What was the aft board is pulled up a bit. What was the forward board is lowered fully. The previous tiller extension is taken off the "Whipstaff" and the other one attached. The sheets are

pulled to take the booms to that end of the boat which was the bow but will now be the stern and the yacht sails off in the opposite direction to that it sailed before. The jib may then be set from the new bow.

The sailing efficiency of Cheers

As a yacht, *CHEERS* can be very simply summed up. She is functionally, a catamaran with as much weight in the weather hull as it is possible to get. Perhaps the value of this can best be explained by the fact that one of her greatest admirers in England is Mike Ellison who, when sailing in the Round Britain Race in the catamaran *IROQUOIS* with his brother Peter, always carried the heavy weights into the weather hull on each tack. To be more technical, modern catamarans do not seem to mind unequal distribution of weights between the hulls as far as speed is concerned but they will stand more wind if the weather hull is the heavier. *CHEERS* has this feature built into her.

The potentially of the Cheers type of yacht

From the foregoing writing, it might seem that *CHEERS* is only a slightly improved catamaran. She is a pure racing machine which sailed very fast in the OSTAR, relatively faster than any other boat for the whole voyage. Moreover, though she can stand more wind than a catamaran because her centre of gravity is more to windward, she also suffers from the fault that, if she should be taken with the wind from the "wrong side" she would be more easily capsized than a normal cat. This indeed happened to Tom Follett in *CHEERS'* early trials and was the cause of the large bulge built into her on the weather side above the water, which makes her self-rescuing in the event of capsize to "windward" when coupled with the buoyant masts which, by themselves, prevent capsize more than 90°. Capsize to "leeward" is probably impossible due to the low rig and having two thirds of the displacement in the weather hull.

The *CHEERS* type of yacht, however, has two potentialities for improvement which were not built into *CHEERS* herself. These are:—

1. Hydrofoils. Three or four hydrofoils could be put on *CHEERS* all sloping up to leeward and several or all of them steering. These alone might produce a craft which could cross an ocean under sail at speeds undreamt of at present. However, a very highly efficient sail would have to be used for such a boat and fortunately the method of handling is ideally suited for what may be the best sail of all which is the second potentiality.

2. The Semi-elliptical squaresail. This sail is ideally suited to the "Proa" because it has least movement for the change of tacks. If caught aback, it will have least tendency to capsize the craft to "windward." And finally, it is so easily reefed or furled.

Summary

CHEERS is a distinct improvement on the ocean-going catamaran by having greater stability. Perhaps, however, the most exciting thing about her is the appropriateness of the design for the addition of hydrofoils and the semi-elliptical squaresail.

CHEERS

by Dick Newick (written before the race)

The 40-foot proa *CHEERS*, skippered by Tom Follett of Coconut Grove, Florida, is considered in some quarters to be a formidable contender in the third Single Handed Transatlantic Race, which begins June 1. The race starts in Plymouth, England, and finishes at Newport, Rhode Island, a distance of 2800 miles by the most direct route.

CHEERS, owned by Jim Morris of landlocked Denver, Colorado, was designed and built by Dick Newick of St. Croix, Virgin Islands, especially to compete in the Single Handed Race. The design is based on the old Pacific Island outrigger, but differs in that the main hull is kept to windward where its weight is more desirable.

The equal hulls are similar at both ends and the rig can be reversed to allow sailing in either direction. This manoeuvre takes longer than conventional tacking, but once underway, *CHEERS* has remarkable speed and directional stability. Sails and centreboards can be adjusted for self-steering.

CHEERS is 40 feet long with a beam of 16 feet, 8 inches and a racing weight of 3000 pounds. The working sail area of 330 square feet can be almost doubled in light weather. Construction is wood throughout with triple diagonal African mahogany planking and laminated spruce spars. Cross-members are all resorcin glued; hulls are covered with polypropylene cloth and epoxy resin.

Accommodations aboard the proa are limited to the essentials; plenty of stowage, a comfortable berth, a large table for cooking and navigating, plus a well-sheltered cockpit. Nylon webbing between the hulls adds considerably to usable deck space.

CHEERS was designed with an eye to achieving full utilization of Skipper Tom Follett's extensive offshore sailing experience, which includes two Transatlantic crossings in his own yachts, one of which he sailed solo from England to North Africa.

Follett is a husky 50-year-old electronics engineer of myriad skills, among them such non-seagoing specialities as gourmet cooking and Flamenco guitar playing. In the past several years, he has delivered a wide variety of yachts in both the Atlantic and Pacific, working with Patrick Ellam of Larchmount, New York.

Follett was a World War II fighter pilot and also has served as a Merchant Marine radioman. He has lived throughout the United States and Europe, pursuing a career in electronics engineering. Follett's wife, Priscilla, occasionally shares his seagoing but prefers to stay at home during her husband's longer voyages.

The *CHEERS* skipper got his introduction to multihulls by sailing in Dick Newick's 36-foot trimaran *TRICE* along with, but not as an official entry in the 1964 Bermuda race. The *TRICE* beat all but two of the 135 official racers.

CHEERS has been more than adequately tested at sea since her launching in December of 1967. Those who have worked aboard her, veteran seamen

all, expect *CHEERS* to be a strong contender in this year's Single Handed Transatlantic Race.

The *CHEERS* project team, co-ordinated by owner Jim Morris, is in England to conduct final preparations for the start of the race. *CHEERS* was sailed to England by Skipper Follett in the early Spring.

LETTER

Dick Newick

1st July, 1968

Dear John,

Waiting was the hard part, but that's over now for the *CHEERS* team anyway. Tom got to the finish line, about a mile off a rocky lee shore, at midnight on a rainy, foggy, dark night, wind gusting to 20 knots. He approached to within a mile or so but didn't think it prudent to cross, so sailed out to sea again and came back at dawn when he could see more. We had been out looking for Tom in a small motor boat because he had been reported passing Nantucket shoals at 11.00 a.m. that morning. Evidently we *just* missed him, but we were there to greet and tow in *VOORTREKKER* as she crossed the line just at dusk—a real thrill to see her come boring out of the fog under main and Genoa. Bruce didn't know how he'd placed until we told him he was second—a happy moment.

SIR THOMAS LIPTON finished on a similar night too, but we weren't out then. The *only* sighting of *CHEERS* was at the Nantucket light, or at least the only reported sighting. Tom saw a few vessels which he thought might report him, but didn't. His course went quite far south—a bit south of the Azores, then north again, never pinching, but trying to keep moving fast despite headwinds. He had more than 3 days of calm and went swimming twice, also had one 55 knot gale. The boat behaved beautifully, no breakage, and she looks better than when she left Mill Bay Docks—just a bit cleaner. Tom jettisoned a large part of his stores as the trip progressed and it became obvious that he was overstocked by a considerable amount of food, water, and fuel for heating and cooking.

Yesterday we sailed my new *TRIAL* along with the *SIR THOMAS LIPTON* in an 18 knot breeze to windward. *SIR THOMAS LIPTON* is a very pretty craft underway and obviously extremely well thought out. She outpointed our 36 ft trimaran but couldn't outfoot us. On a triangular race I believe the Tri would take her almost always. Would like to match them sometime! During the start of the Bermuda Race the previous Sunday we did not have *TRIAL*'s Genoa set, so were outperformed by the larger racing boats. With our Genoa it would have been a good race.

Tom's best day's run in the Single-handed Transatlantic Race was his only good one; 250 miles between good sights. I think that *CHEERS* was a better choice for the race than a tri or cat would have been; she probably should have been a bit bigger to compete successfully with our very high-powered competitors, but perhaps future races will be the best way to assess

the type's potential. One race can't prove much, but no doubt there will be lots of people using this race to *try* to "prove" preconceived ideas. Probably the only sure thing you can say about the lessons to be learned from this race is that the more money one can spend (wisely) the better one's chances are of placing well.

Rescuing Joan de Kat and Edith Baumann was lucky. I'll be interested in hearing their stories, which should help future would-be racers to start better prepared. We have just heard here of Eric Willis getting help by air, which we trust will be adequate to get him in all right. Ironical that so many of the trimarans have had trouble. Knowing all of them as I do, I can't find any reason to think that their troubles had anything to do with the fact that they had three hulls. In each case it was other factors that were the trouble.

Despite last Sunday's "Observer's" comment (that Tom seemed tired when he arrived here, as did Bruce, compared with Leslie Williams) he arrived in far better condition than the first two finishers, both over 20 years younger than Tom. Of the three that beat Tabarly's 1964 record, Bruce had no doubt pushed himself the hardest.

CHEERS' future is undecided right now. She doesn't lend herself to easy conversion to other service and she probably isn't enough of an antique to become a museum piece.

Ed.: In the end, *CHEERS* was given to the Exeter Ship Museum (England) where it is now.

Cheers,

Dick

P.S.—John, we are at a loss for the name of the proa change-direction manoeuvre—not tack, not wear (someone suggested "Tear"). Do you know, or can you suggest a source to find out the Pacific Islander's name for the act of changing ends in a proa.

I'm trying to get people used to the term "ama" for outrigger, "aka" for crossmember, but find that "vaka" for main hull doesn't come so easy (this is also Spanish for cow).

Adios,

Dick

Dick Newick

Dear John,

I wouldn't call Joan de Kat's alloy poles "well stayed" to the main hull. The stays themselves were strong enough but, as I told him, the method of attachment to hulls, mast and cross members too, was *very* weak. I suggested simple strengthening, but he was too "busy" to get the job done before the 1st of June.

Your observations on self-steering for multihulls are interesting. If a multihull is to win the OSTAR, relying on a vane gear, there remains much to be done. Bill Howell told me after the race finished that, on *GOLDEN COCKEREL*, he was completely at ease when she was doing 8 knots with the self steering gear. At 10 knots, he got concerned about what *might* happen,

and at 12 knots, he figured that something *would* happen unless he slowed her down. Of course, he could sail her while at the helm himself at much higher speeds, but couldn't expect to be efficient for long periods.

My experience with cats and tris leads me to believe that only a few exceptional craft of these configurations can be relied on to self-steer without either vane gear or a human helmsman.

The two-centreboard proa with a rig well divided fore and aft can easily be adjusted for self-steering—real *Self* steering, not by the use of gadgets or people. If this is true, then *CHEERS* may indicate the direction for further development of a *really fast* boat to win this difficult race. Many multihulls have the speed potential, but this must be *sustained* to win.

CHEERS had a best days run of 250 miles, followed by *VOORTREKKERS'* 226 miles and *SIR THOMAS LIPTON's* 211. The next two finishers were below 200 and I suppose that the rest of the fleet was also.

Tom (Follett) sailed *CHEERS* south of the latitude of the Azores, looking for a favourable slant of wind which he never found. He was becalmed for a total of over 3 days and ended up close to the Great Circle track, still looking for a favourable wind. He probably sailed 500 miles further than any of the first 5 boats to finish. He certainly arrived in Newport the most rested and relaxed of the first 5 skippers, despite his small quarters aboard *CHEERS*.

Report on the first five yachts on arrival

CHEERS had no breakdowns or trouble of any kind. When Tom arrives back here in St. Croix, probably next week, he will have sailed about 10,000 miles alone in the last four months. He is a wonderful seaman and, as you might imagine, the best of shipmates, too, when he isn't sailing alone.

SIR THOMAS LIPTON reported no breakdowns, but Geoffery Williams did have to go to the mizzen masthead to free a jammed halliard.

VOORTREKKER had three cracked frames and a few copper rivets pulled through their clench rings where frames and longitudinals intersected. This was, of course, nothing serious with her rugged cold moulded ply hulls. She also had two big winches seize up, which were later made to work again, but not perfectly. The roller reefing gear was made inoperable by a part failure, but a simple jury rig made the gooseneck useful for all but roller reefing.

SPIRIT OF CUTTY SARK's major problem was a complete lack of electricity after the 14th day out due to a broken generator fuel line.

GOLDEN COCKEREL arrived in good shape except for one cracked frame forward, near the keel.

I hope that some knowledgeable writer gathers the data that this race has produced. Some fascinating comparisons might be made, knowing where each boat was and what weather she was having at regular intervals throughout the race. Such hard earned knowledge should be shared.

Cheers,

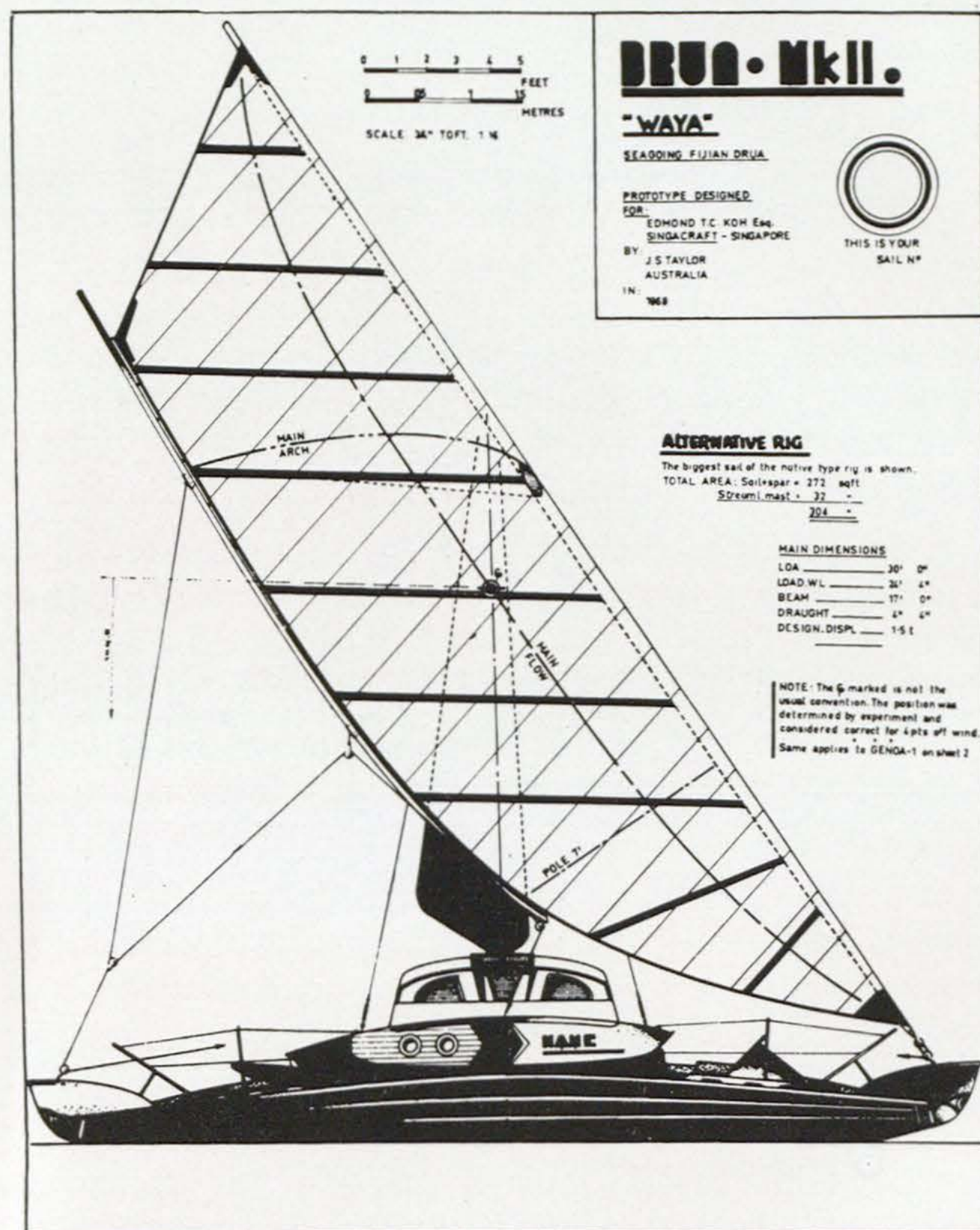
Dick

FLYING PROA

by J. S. Taylor

(By courtesy, Editor, South African Yachting)

Trying to analyse what makes an outrigger boat, or a flying proa for that matter, would throw us far out of our present and very restricted frame of reference. The following is an attempt to find a technically correct definition for *CHEERS*' type only, to cut down the very involved analysis to fit our space.



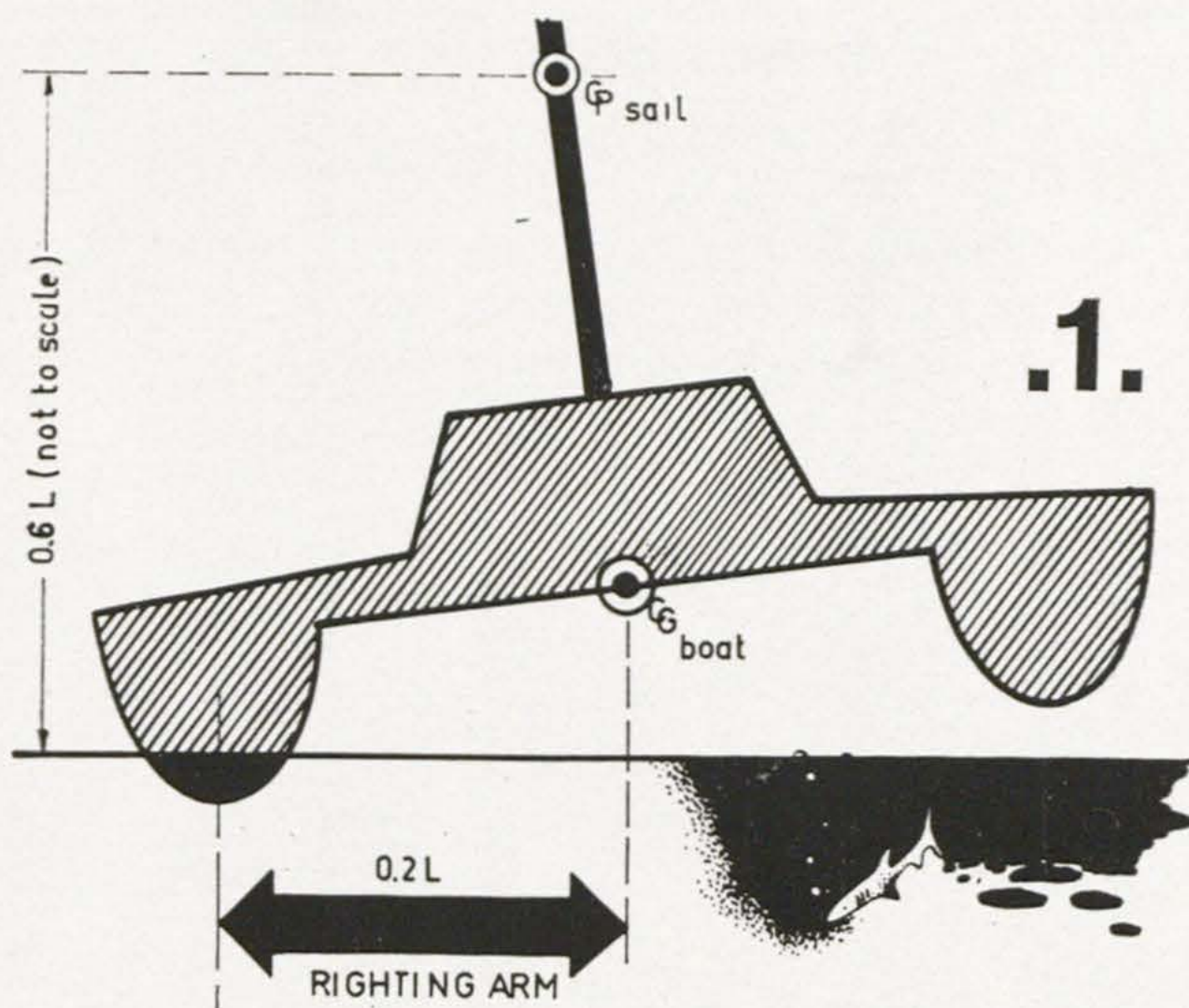
The two hulls that make *CHEERS* are of equal length and, as far as could be ascertained, they have identical cross sections below the water. Multi-hulls answering this description were called catamarans right up to the date *CHEERS* hit the headlines. Further study would reveal more than one feature of the boat that does not follow standard catamaran practice; and we will take them one by one to see if the departures are basic or not.

The cabin is off-centre and so is the rig. Both arrangements are far divorced from the common practice, but it is not unreasonable to assume that neither of them would disqualify *CHEERS* in any race restricted to catamarans

only. The departures simply do not alter the basic characteristics of the boat, which is a twin-hulled craft. In turn, if she qualifies for the catamaran bracket then why the outlandish configuration?

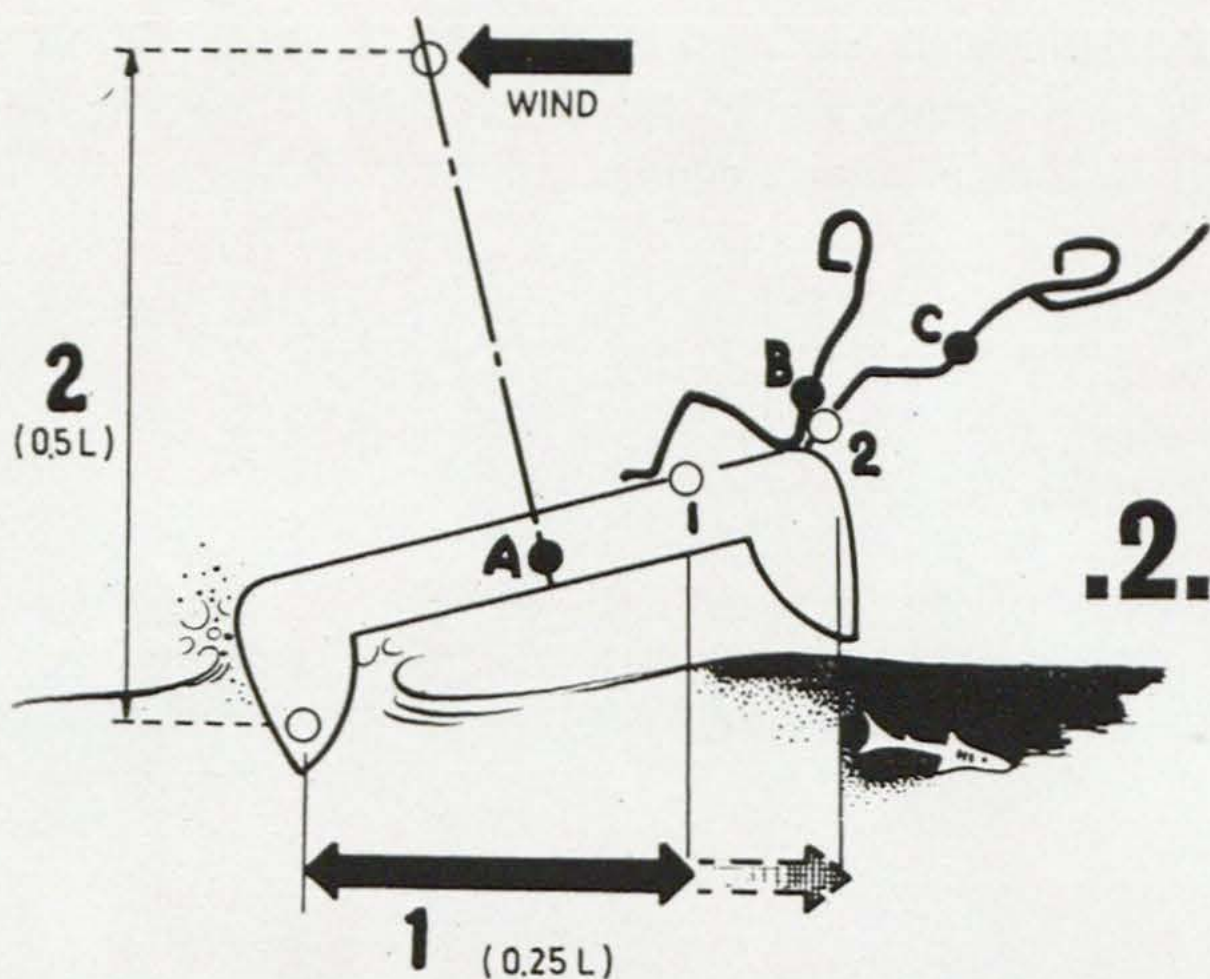
CHEERS was designed to win and her geometry reflects on the familiar fact that while the small racing catamaran is fast, the cruiser-racer version has never come up to the rather irrational expectations predicted for it. The big catamaran obviously lacks the necessary driving power to sail on par with the small racing boat.

Fig. 1 shows a cruiser-racer cat, of the accepted proportions with her windward hull just clearing the water. She is at her optimum angle of heel and she is generating just as much sail carrying power, and incidentally



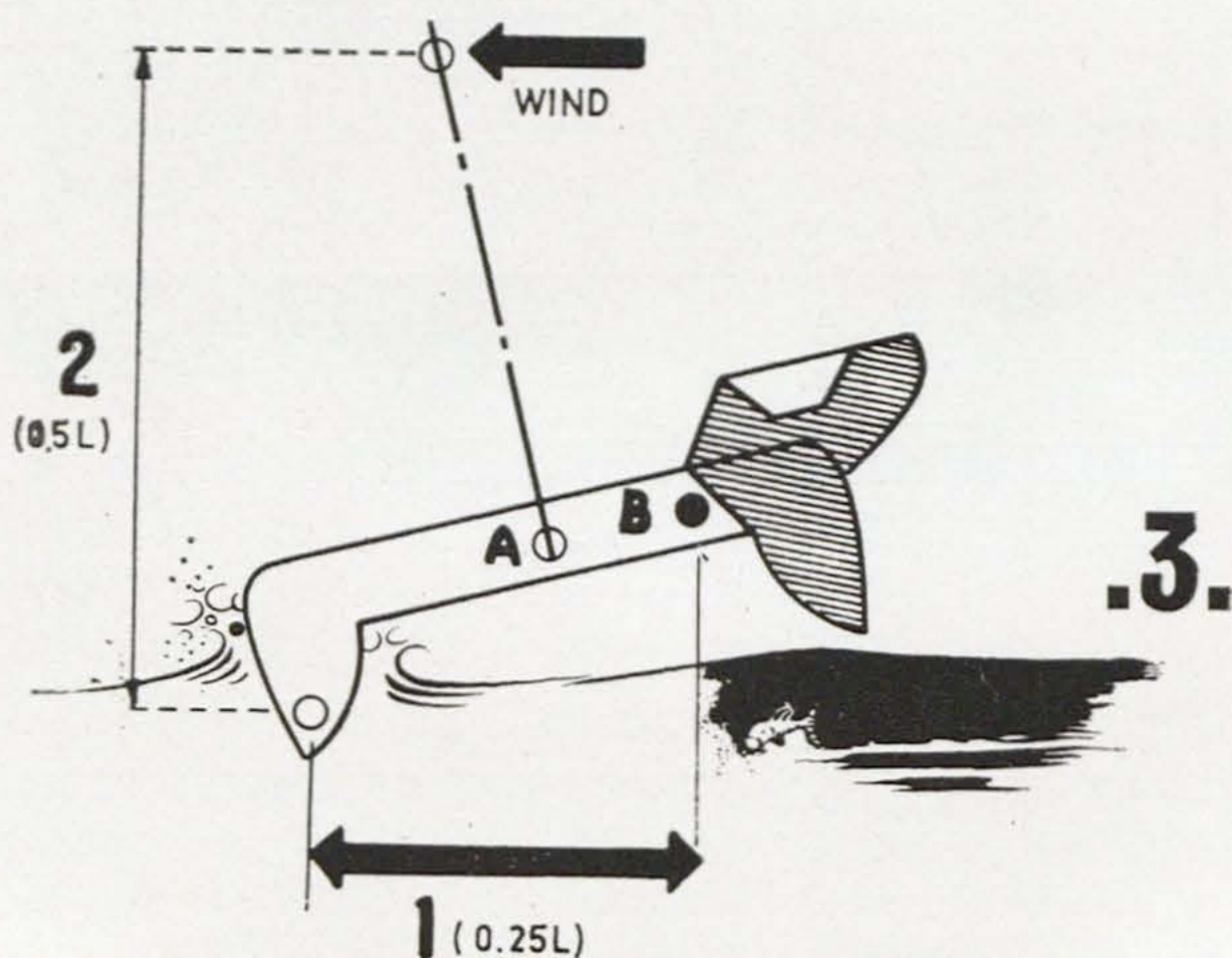
driving power, as she is capable of. Her maximum drive is the subject of a single factor: the heeling arm ($0.6 L$) to righting arm ($0.2 L$) ratio, which is $3/1$. The given ratio is typical for a well-designed offshore catamaran of recent vintage and means that one ton of wind pressure acting on the sails at right angles to the axis of the boat would make a three-ton catamaran heel far enough for the windward hull to clear the water.

Fig. 2 shows the same relationship for a small racing catamaran. The heeling arm/righting arm ratio would be the same except for one reason; the crew is hiking out. The Common centre of gravity (2) of their individual weights (B and C) is far out from the centre and shifts the common centre of gravity of the craft and crew to the point marked 1. The actual righting arm acting to this point is just about 50 per cent longer than that of the cruiser-racer. The driving power which directly depends on the heeling arm-righting arm ratio is affected in the same way; the propelling force of the racing cat, at maximum speed is 50 per cent higher than that of the cruiser-racer.



The speed advantage gained by hiking out is too obvious to the practical sailing men and we do not need to elaborate any further. In turn, there is no way to use the same idea on a 40-ft plus offshore boat.

Or is there?



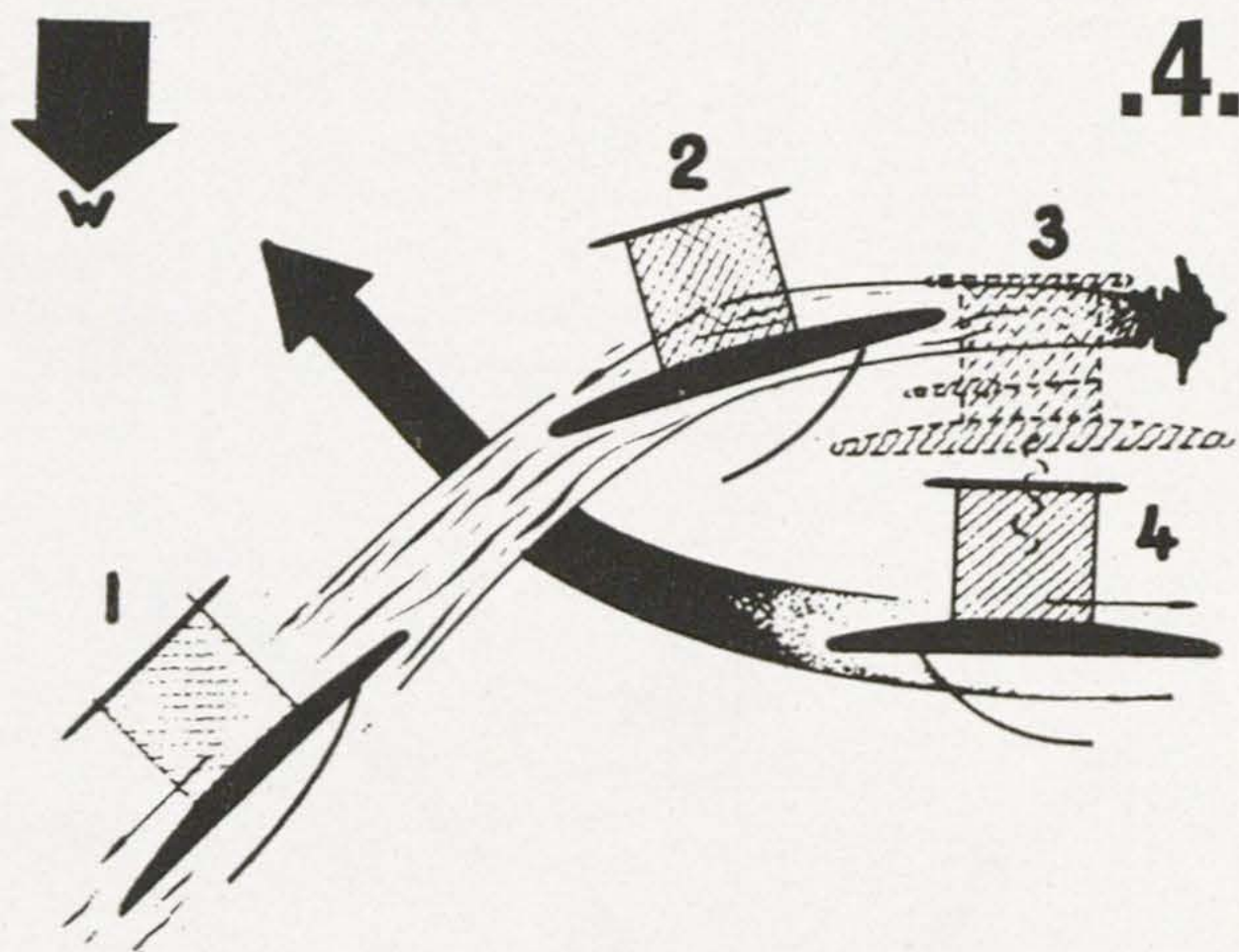
The *CHEERS* design presents one solution to the problem and Fig. 3 shows how it was done. The living quarters and stowage were moved into one hull and so was all the heavy equipment. They play the role of the crew hiking out on a racing catamaran. This trick develops just about the same size of righting arm as that of the racing cat, with the crew sitting on top of the windward hull. This arrangement assures the racing cat performance for *CHEERS*, and she has proven herself a fast boat indeed. Still, if one is a catamaran or any other small boat sailor, then discovering the flaw in any idea is natural. Here it works only on one tack and, after coming about the weight would be on the wrong side.

CHEERS' designer turned to the Polynesians for a solution and he kept her loaded hull to windward all the time by using the proa tack-changing technique. *CHEERS'* does not come about, but changes ends instead. Using this particular sailing technique will turn the twin-hulled craft into neither outrigger boat nor flying proa. The end changing method was used by the Polynesians not only on outrigger boats but while sailing their big double canoes, the ancestors of the modern catamaran.

CHEERS' design is the most interesting contribution to modern multi-hull development at present and could be a very successful one. The growing number of multi-hull sub-types justifies the analysis above. Her design has introduced something new in the game and obviously added to the confusion. *CHEERS* technically is a catamaran which very cleverly uses the advantages of the racing-type weight distribution in spite of her size. This new variation to the catamaran theme was made possible only by accepting the Polynesian technique of changing tacks, a method totally alien to the Western sailor and practically unknown to many.

The way of the Polynesian—unlike the conventional craft—and this includes multihulls too—the Polynesian seagoing canoe can change tack at any point of sailing except on a dead run.

Fig. 4 shows the standard way the native craft change tack.

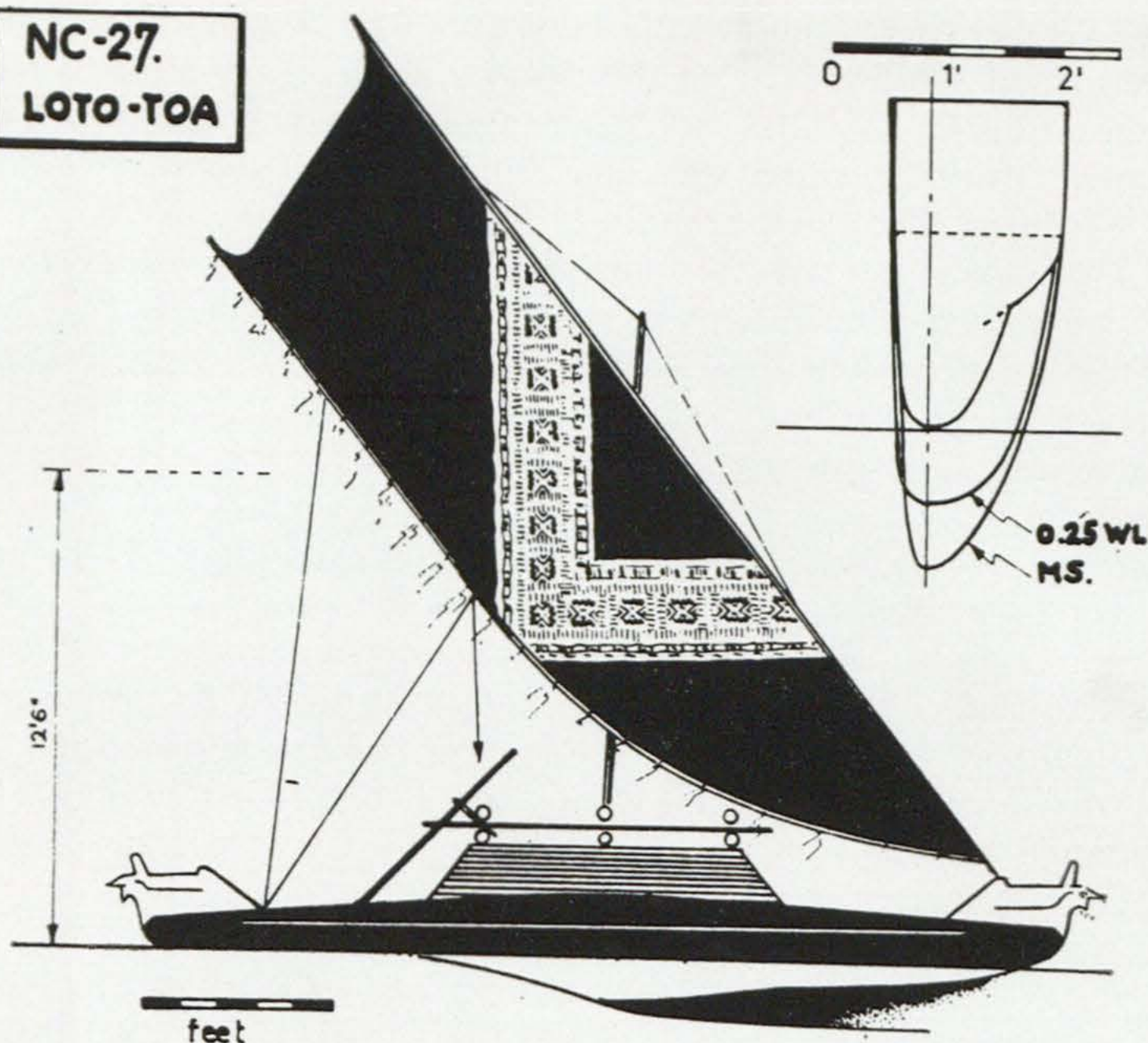


This manoeuvre was evolved to suit the rather clumsy native rig and obviously gives the smallest trouble to carry it out.

The procedure is as follows: No. 1 position is hard on the wind and the boat starts the manoeuvre by *bearing away* until on beam reach (No. 2). On the reaching course they let the sheets go slack, the boat loses way and they shift sail into a mirror-image position. After trimming sail in the new position she is on her way on a reaching course, but on a new tack. The manoeuvre is completed by turning into the wind and sailing off on the new windward leg.

During the sail shift the boat would drift into No. 4 position, thus losing ground. On a boat of about 30-35 ft a trained crew can cut this idling period to 20 seconds. Native crew of three, using native gear, and the Fijian

NC-27.
LOTO-TOA



50

Fijian Canoe

canoe. In turn, the modern rig or the modernised version of the native one positions No. 2 and No. 3 merge. The boat changes tack with practically no drift.

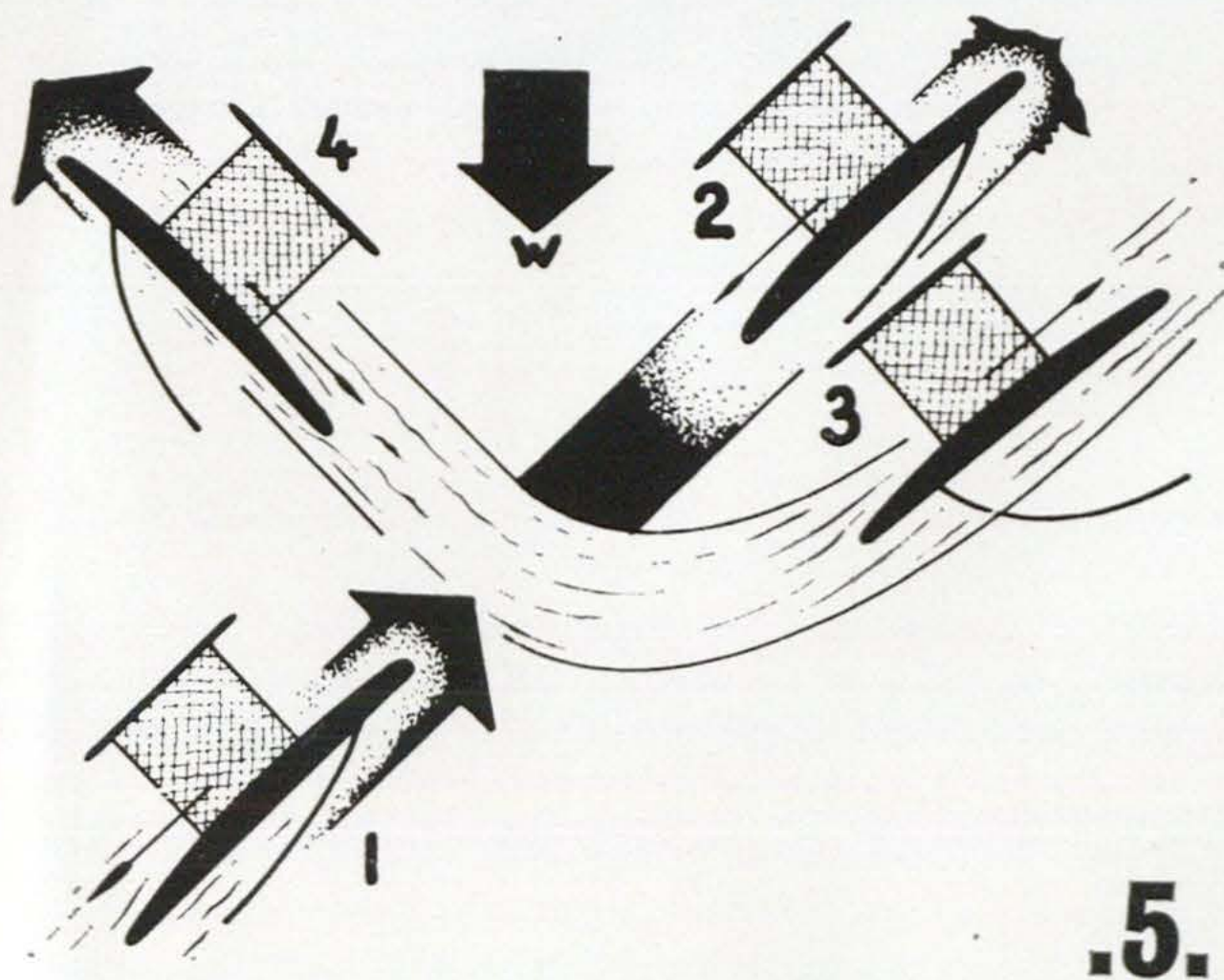
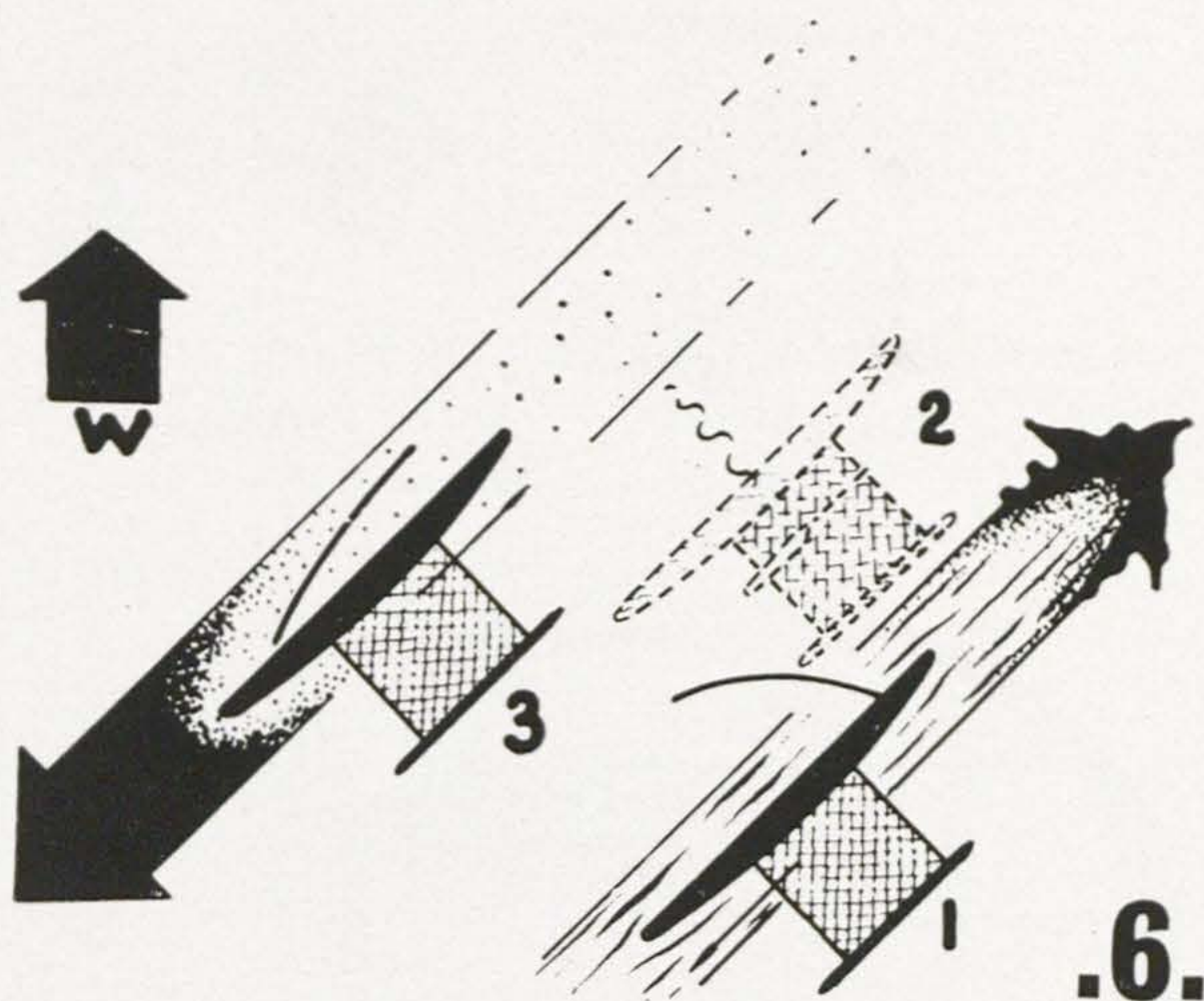


Fig. 5 shows that any modern rig allows one to change tack while still on the wind without going into the intermediate course of reaching. While on the wind (2) the sail is shifted and trimmed and she starts to retrace her own wake (3) on a *broad-reaching course*. The following 90-degree turn brings her into the new leg on the wind. The ability to retrace her own wake on practically any point of sailing is a unique and sometimes very useful characteristic of the boat sailed by the Polynesian way. What she has is a nicely controllable reverse gear, just like that of a powered vessel.

We have seen that she can change tack by going from one reaching course to the other or by changing the on-the-wind course for a broad-reaching one. Naturally the reverse is also true; she can go directly from a broad-reaching course of one tack to a hard-on-the-wind course of the other Fig. 6 shows how it is done.



The modern rigs, or the modernised native ones, have a special trick of their own; they make the controlled drift at any angle from 0 degree (pure headway) to 90 degrees (pure drift) a practical proposition.

The sail is hoisted on a forestay like a jib but the running rigging is like that of a spinnaker. Either end of the foot of the sail is under control. By slackening the mainsheet we can spill the wind and slow down the craft, just as we can on any other boat. In turn we can stop the boat dead without touching the mainsheet, by letting the pole out to the lee. By doing so we can trim the foot of the sail parallel to the boat's axis, thus having a billowing sail and no drive. What we have now is maximum drift.

In this trim a few inches more slack to the pole starts to move the boat slowly in the opposite direction to the original course, still mainly drifting. More tensioning of the main sheet has the very same effect. A few inches slack on the mainsheet or some extra tension on the sheet controlling the pole has the reverse effect.

By manipulating either sheet, or both, the boat would drift under perfect control to any points inside the semi-circle to the lee. Fig. 7 shows that the

boat would drift down wind with her sail full if the foot of the sail is trimmed parallel to the boat's axis.

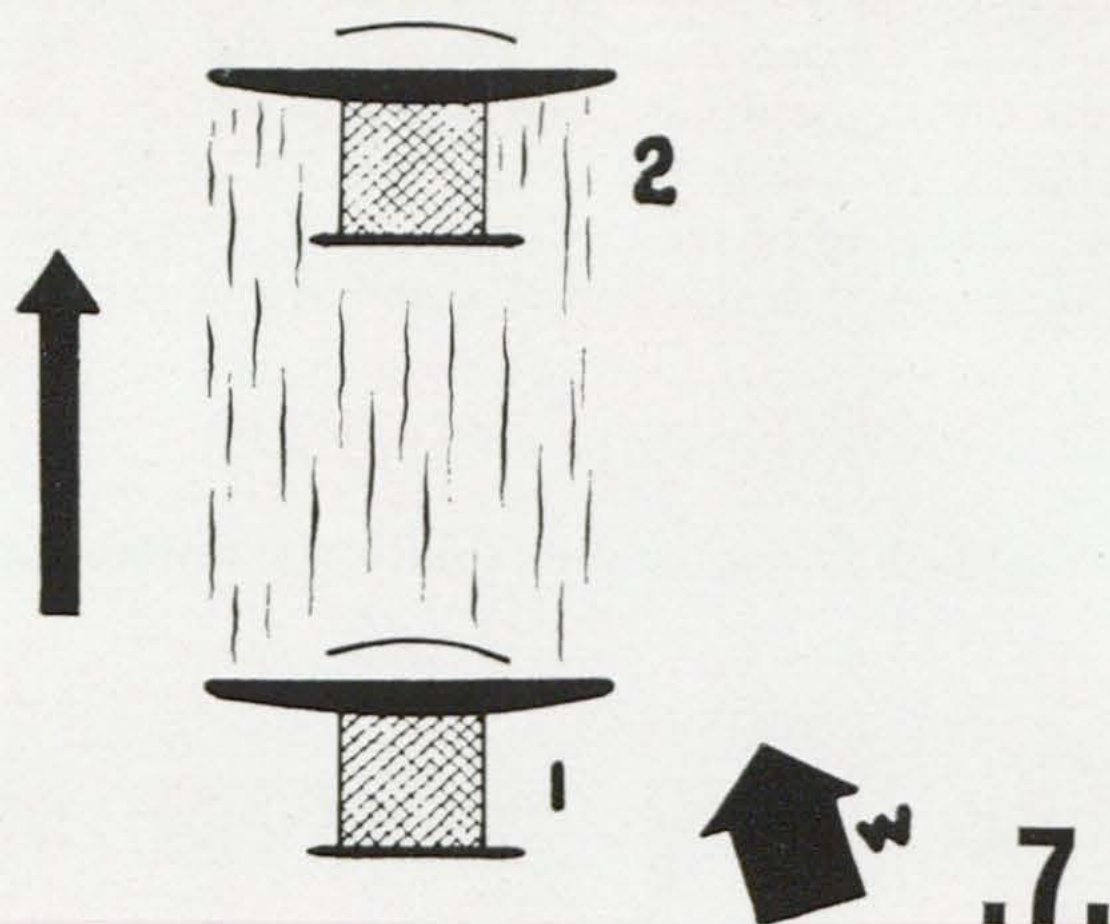


Fig. 8 shows the manoeuvre of the controlled drift, where the object is to pick up the mooring right behind the boat (0) laying down wind without hitting it.

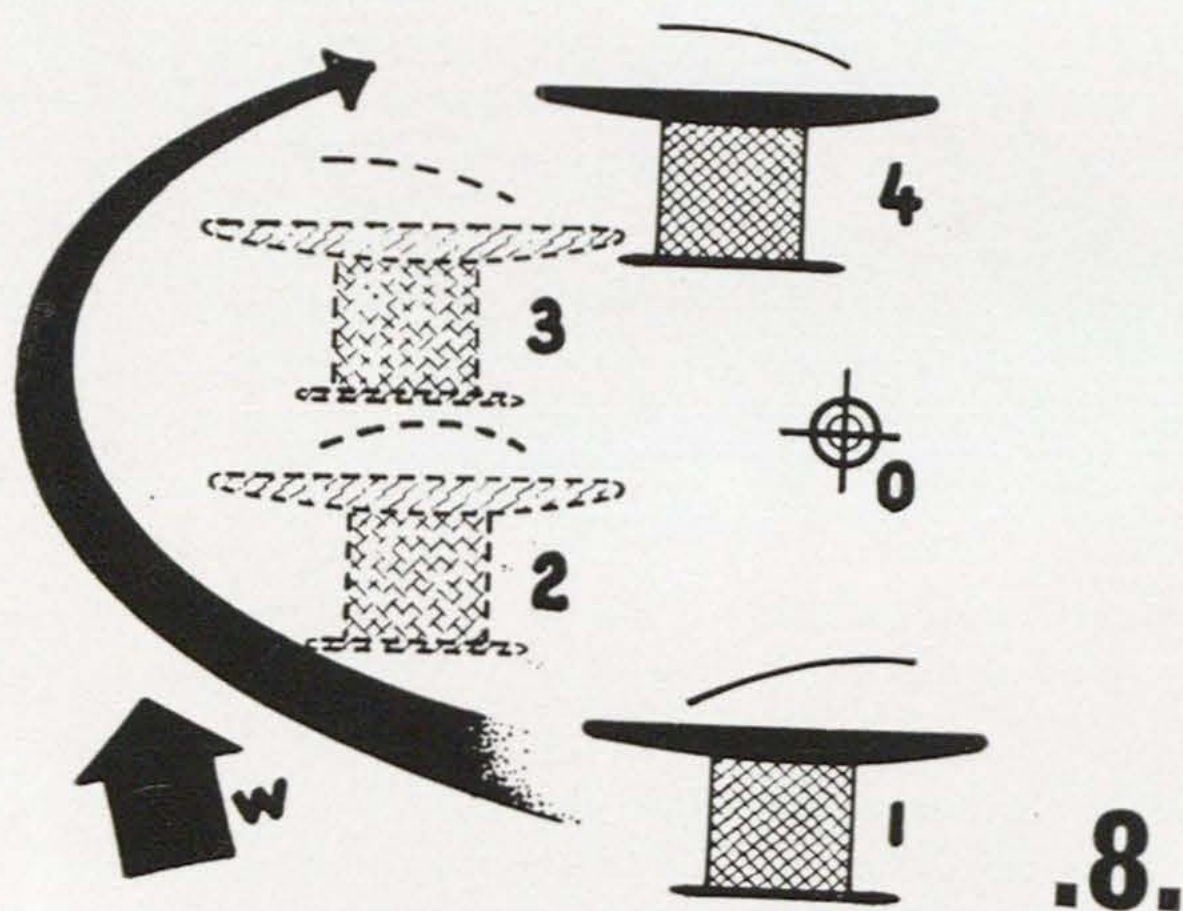
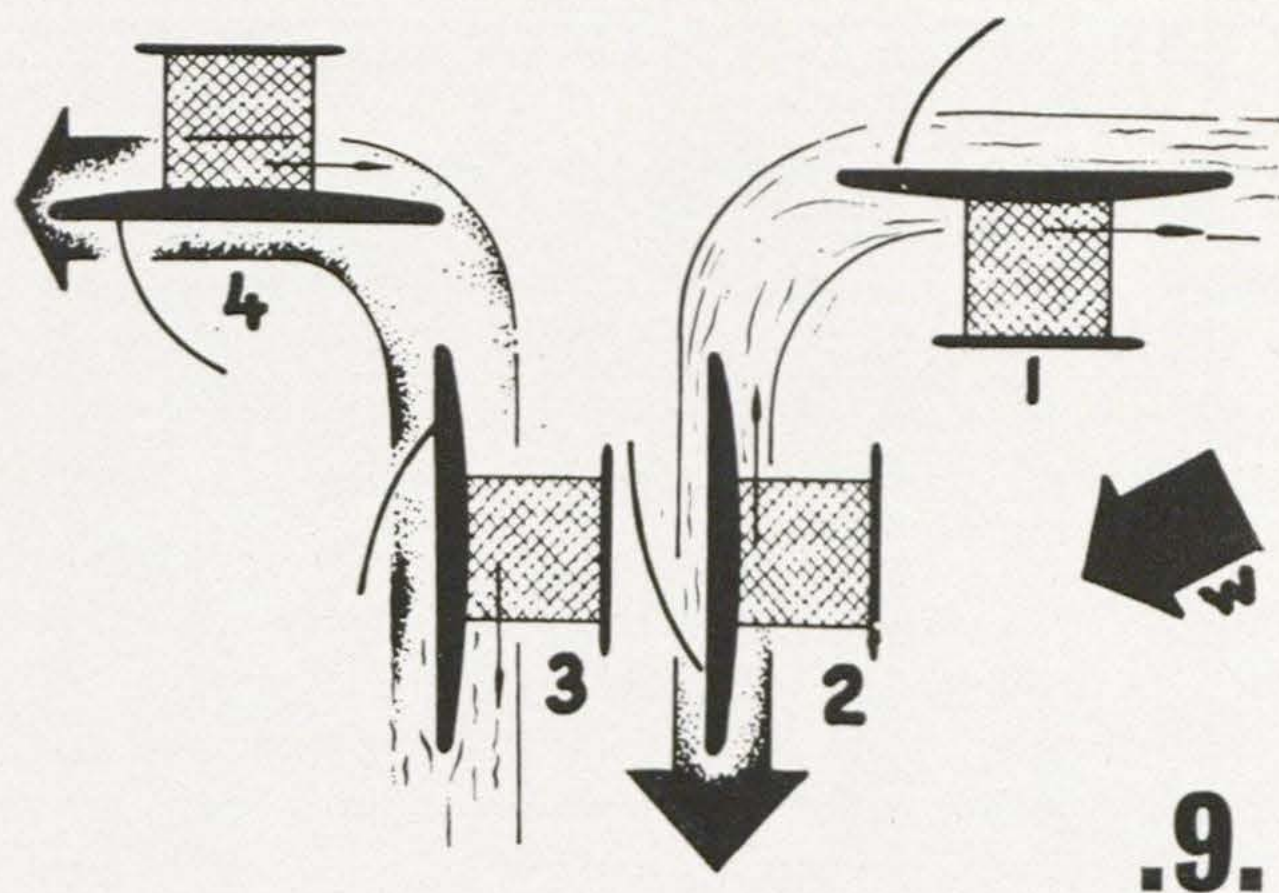


Fig. 9 shows how gybing is done Polynesian fashion. The boat is sailing before the wind, very badly by the lee. She turns into the wind to a reaching course (2) she shifts sail and starts to move in the direction she has come from, still reaching. She bears away until before the wind.

Summing up the manoeuvres: The boat cannot miss tack and will not end up in irons. Gybing is not an extra manoeuvre and cannot play havoc in strong winds. Multi-hull development in a roundabout way returns to the original source, as shown by *CHEERS* and the growing number of flying proa designs.

The Polynesian type with the built-in reverse gear is apparently here to stay.



PEN DUICK IV

by E. D. Fisher

130 Hollingbury Park Avenue, Brighton S63 15, Sussex

The Single-handed Transatlantic Race was conceived by Blondie Hasler primarily as a means of improving the design of sailing yachts. It is a major tragedy for yachting and yachtsmen at large that *PEN DUICK IV* has been forced to retire at such an early stage, especially as the trouble which caused the retirement was of a comparatively minor nature in a field where many varied designs already work satisfactorily.

The self-steering gear from *PEN DUICK III* was adapted to fit the new trimaran. Tabarly is reported as saying that at over 9 knots the vibration was so great that the gear was shaken to pieces. It can be assumed that *PEN DUICK III* seldom reached 9 knots and that *PEN DUICK IV* often exceeded 9 knots for long periods. However there must be more to the story than this and the heart of the trouble may be the secret rudder. So great is the emphasis on speed in the general design that the self-steering may be assumed to be designed so as to produce the least drag when correcting course.

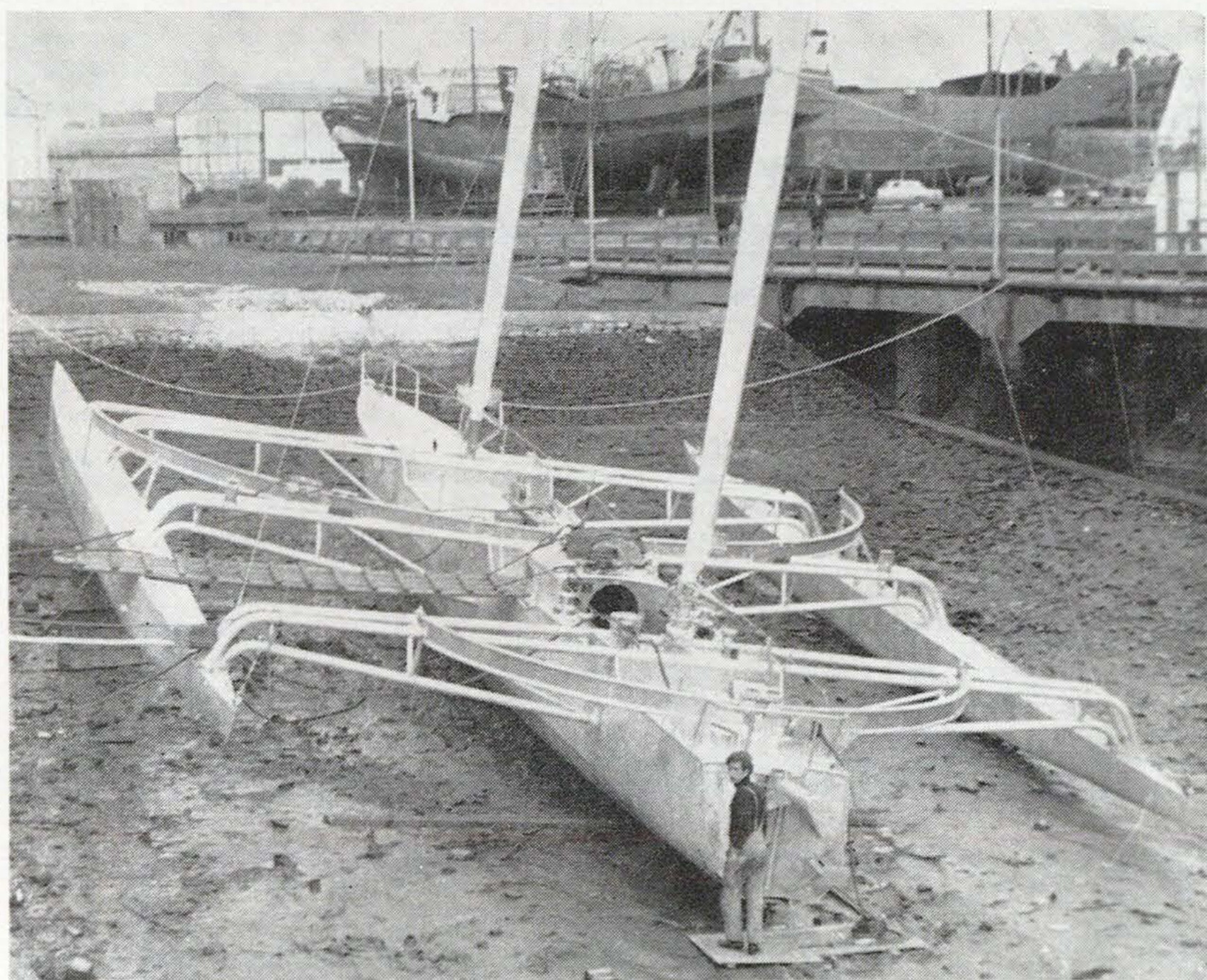
Inspection of the rudder in the water before the start showed a small, thick, balanced rudder with a balanced aileron type flap in the trailing edge. This flap had a tubular projection from its rear edge. This balanced aileron is presumably the course adjuster and is operated through the 4 in thick stock. Every schoolboy knows that it is possible to make a flexible batten vibrate violently when it is forced through the water, edge first. The aileron flap may have been over balanced or flexible and perhaps produced the vibration. It would be interesting to know when the rudder and self-steering gear were fitted; a specially built ancillary rudder was used on the first sailing trials at Lorient. This was fitted into two rings on the port side of the transom; these rings were still attached at Plymouth.

There should be no secret joy, no smug I told you so's and only true commiseration and sympathy for Tabarly who is obviously very distressed at

the turn events have taken. Contrary to the impression given by the more sensational journalism connected with the race, *PEN DUICK IV* is not a revolutionary design. There is not a single feature that has not been tried and tested in various other boats. *PEN DUICK*'s contribution to yachting is in combining all the individual features in one homogenous whole. It should not be forgotten that Michael Richey's development of *JESTER*'s junk rig and *PEN DUICK*'s adjustable wing masts are the only entrants in the race to make any significant attempt to produce an improved form of motive force in sailing yachts.

PEN DUICK IV lies glistening on the water in polished aluminium alloy. Her builder described her as being designed and built like 'un voiture de course' and this appears true. She is immediately a winner. There can be no other boat to compare with her on absolute terms. She is instantly attractive; stark. The genuinely exquisite and robust construction and workmanship is striking. The boat is made of A64MC light alloy, an aluminium alloy named Duralinox, and built to the very highest possible standards of workmanship by Chantiers de la Perrierre, Lorient, in Brittany. The metal does not need painting to resist corrosion from sea water, so all the details stand clear. There was no antifouling so it is possible that the metal itself has some antifouling properties.

The next striking point is the proliferation of tubes; there are ten 4 inch diameter tubes to each float, and the two 10 in deep girder mainsheet tracks



PEN DUICK V

laid from float to float in huge semicircles around deck level. These will all cause a large turbulent windage and will probably be detrimental to performance on the wind, and may cause interference with the water. The last major impression was the noise conductivity. When a workman chipped weld flake off the main hull on the le Perrierre hard, the resounding noise caused a physical shock 15 ft 0 in away. In a seaway the noise level inside could be very high unless adequate sound insulating techniques are employed, noise fatigue could be an important factor.

In a general way, the design is similar to the Toria type, long thin hulls with a cross section giving the least wetted surface all joined by tubes and having no connecting decking. Only one float is in the water at one time. For *PEN DUICK* the main hull and the floats have been extensively tank tested and the sail and masts wind-tunnel tested.

However there are important design differences. The short angled lifting dagger board is set in a trunk in the centre main hull forward of the cockpit. Its top and lifting gear are 12 in above deck level. Its total length is therefore the depth of the main hull plus that part of the blade projecting above deck level in the trunk below the lifting gear. The floats are asymmetrical in section, flatter on the outside in the same way as a Proa. This is not supposed to give hydrodynamic lift to windward in the same way as an aeroplane wing. The flattened outside was found to be important in resisting leeway. The shape of the inner side is dictated by buoyancy requirements and lack of resistance to forward motion. They have long raking curved prows and vertical knife-edge sterns.

The last major design development, apart from the secret rudder, is the motive power. The ketch rig has an almost equal area fully battened main and mizzen sails. There are revolving wing type masts and huge main sheet downhaul trolleys and tracks laid in a semicircle from float to float. The revolving masts have long cantilevered brackets below the booms. The brackets and the booms are connected by a tackle which allows the angle of the mast to the boom to be adjusted. This tackle goes about automatically. The masts are about 30 in deep by 8 in thick with about 24 in depth of convex curvature on the trailing edge into which is built the sail track. This curve is the feature which gave *LADY HELMSMAN*'s sail such a good shape. The *PEN DUICK* masts will give an excellent leading edge to the sail and since the masts turn and can be fixed at a different angle to the boom the sail will set in a good curve. The sails appear beautifully cut and when set have a very deep curvature ratio of about 7 : 1. The masts are not curved as much as that on *LADY HELMSMAN* and will not give *PEN DUICK IV* the 14 knots under mast alone attributed to *LADY HELMSMAN*. However the masts will certainly produce a driving force, whether this feature will be a help in heavy weather or a hindrance is not known. When *PEN DUICK* arrived at Plymouth an extra set of spreaders and diamonds had been fitted to each wing mast to increase the rigidity of the top 6 ft which was found to be too flexible on trials. It is extremely unlikely that these masts would have given structural trouble had the starboard rigging not been torn badly in the collision. It is worth remembering that *PEN DUICK* continued on

her course for the rest of the night with the rigging loose until Tabarly discovered the full extent of the damage at dawn. He then made temporary repairs and sailed from west of the Scillies to Plymouth.

There are other notable and more subtle design features. The centre of buoyancy of the floats appears to be laterally in the area of the centre of effort of the sails. The floats are extremely fine fore and aft and may lack forward buoyancy when driven hard although there is about 15 in of shear forward on the floats to counteract diving.

The main hull is also very fine forward with the centre of buoyancy again approximately below the centre of effort of the sails. The bows are cut away below water leaving the dagger board as the pivot point for the rudder to act upon.

The rudder is built to a secret design and was not fitted until just before the Race. It is placed behind the counter with large diameter stocks set in tubes and the blade below the extended bottom plating as with some power boat propellers. These factors with the asymmetrical floats may give the boat a tendency to yaw and make it difficult to steer, thus straining the complicated self-steering gear.

The standing rigging is elegantly simple, one full length diamond set per mast reaching to within 6 ft 0 in of the masthead and one shorter diamond from the masthead to main spreaders; masthead stays to the bow and floats. The fittings and gear are superb and look comfortably positioned but Mr. Tabarly will have to spend a good deal of time on the complex shaped, narrow decks and clambering about the float support tubes which lack hand holds.

There are very long sliding genoa sheet lead tracks on each float, these do not appear to have stop ends so it would be possible to lose the genoa sheet and lead, though not the tail as this would be cleated on deck.

On the first sailing trial in calm sea and a force 2-3 winds, *PEN DUICK* moved quickly and handled well on the specially built auxiliary rudder. The main rudder was fitted in secrecy before the race. After about 8 or 9 miles sailing, and after going about quickly, *PEN DUICK* came hard on the wind. Soon the sails were suddenly taken down and *PEN DUICK* returned to harbour under outboard power. The top 6 ft 0 in of the wingmasts between the head of the diamond and the masthead stays flexed badly when the boat became close hauled and have since been stiffened with a more comprehensive mast staying.

PEN DUICK IV is an absolutely superb looking vessel and would have been the only one in her class, the top class in the race, and all the foregoing remarks are made in that context. To an Englishman, the design as a whole has a very French flavour. It seems that perhaps one could go almost as fast a lot more simply. However the same could be said of *CITROEN* and *BUGATTI*. In fact any boating Bugattiste should try to put a deposit pending purchase on *PEN DUICK IV*. He would have a boat to treasure for life and would win enough pots to sink himself.

PEN DUICK IV TRANSPACIFIC

by Alain Colas

(Courtesy of Editor, Modern Boating)

After a new, lone victory in the San Francisco-Tokyo race, Eric Tabarly returned to *PEN DUICK IV*, his 67 ft aluminium trimaran, for another ocean-racing jaunt: Los Angeles-Honolulu with crew, a challenge to the 25th Transpac fleet, and a bid against "big" *TICONDEROGA*'s record.

Friday, 4th July 11 a.m. Hardly an hour to the starting gun and we are still on our moorings at the Los Angeles Yacht Club, a last-minute repair has still got to be retrieved from the sailmakers. In the meantime, our crew of six-four hands, skipper and "Life" magazine photographer—complete with gear and bulky stores try to get sort of organised inside the narrow aluminium cigar.

The race committee must have had some mixed feelings about the unconventional and unexpected French challenge, but Eric Tabarly has made it very plain he does not mean to disturb the race and he has eventually been granted leave to cross the starting line once the monohulls are safely away.

12.00 finds us ghosting up San Pedro breakwater in light airs and choppy swell. A few miles ahead of us, veiled in L.A.'s traditional smog, which so surprised us at first, 72 yacht's of America's best have just dashed away toward the palm-fringed beaches of Oahu, some glorious 2250 miles down-trades.

4.55 p.m. We have just rounded the western line of Santa Catalina Island, leaving astern the "danger zone" of light airs drastically prevailing within Los Angeles bay at night. The wind sets in nice and strong now and we have already caught up with most of the fleet, getting by such nice yachts as *CHIRIQUE*, *NOVIA DEL MAR*, *RASCAL*, *JUBILATION* or *YA TURKO*. This time the race is on for good.

Monday, 7th July. Third day out, course south-west, looking for the Trades. The wind had somewhat gusted up on the first night out and *PEN DUICK* had slammed away from the fleet at ten to 12 knots, dripping with spray and shaking her weary crew madly. A hasty reef had even to be tied to slow down the mad rush forward and keep things under control.

We can pretty soon hoist the large 1800 sq ft spinnaker borrowed from *PEN DUICK III*, the glamorous schooner of Sydney-Hobart and Fastnet fame. But we must be pressing along our machine a wee bit too hard and the chutes keep exploding one after the other. Eric applies palm and needles as fast as he can—the poor boat has been turned into a huge floating loft! But as luck will have it we are soon left with the small storm chute, hardly 900 sq ft. Obsessed with the thought of *WINDWARD PASSAGE* and *BLACKFIN* surfing along under thousands of square feet of canvas, Tabarly wonders whether the race is not well and truly lost for us at this very point.

Wednesday, 9th July, 4600 ft of sail have been blown out of action now—enough material to dress up a battalion! The larger mizzen staysail and the

reaching balloon jib have joined the club overnight. Pressing on as much as we can, we still manage to keep up an average speed of 11 knots, despite the unsettled wind conditions and drastic shortage of canvas.

Sailing right by the lee, we spare no pain gybing as frequently as needed. It is always a tricky manoeuvre on larger ocean-racing yachts, but the complexity of our way-out machine renders it rather thrilling indeed! It's a great ceremony, an intricate choreography which calls for the whole cast (crew I mean . . .) and sends them real wild all over the place, wire-dancing between mainhull and pontoons, escalating or leaping gracefully here and there, panting and sweating in a Samson-like tug o'war with spars, canvas or winches.

Incidents are not at all infrequent, much to the pictorial delight of our good friend Charles Bonnay, the picture maniac "Life" Magazine has sent along with us to prepare a close-up on Eric Tabarly. Thus, that very afternoon, sorry and bleeding I slide down the main mast from where I had pretended to retrieve an escaping spinnaker-pole. Atlantic crew-mate Olivier de Kersauson digs up the last of our cotton wool to patch me up while Jean-Michel Carpentier and Jean-Jacques Sevy unite their knowledgeable beef to finish the job for'ard. "Still learning the hard way, uh!" our unflinching skipper comments from the helm . . .

Thursday, 10th July. Some kind of a breeze this morning after a frustrating night of light airs. Pushed head-long by the powerful Pacific rollers, *PEN DUICK IV* takes off every so often, surfing downhill at 15 to 17 knots. The bows dig under frequently at the bottom of the briny slopes and water pours down below through an over-come forward hatch—pumping up a bit keeps you fit and out of mischief . . .

On the twelfth stroke of lunchtime a bewildered helmsman scores 20 knots "plus" on the Brookes and Gatehouse speedometer—our ski instructor from Chamonix, Jean-Jacques, will sure have a few stories to tell at the chairlift this winter!

Friday, 11th July. Honolulu is only a short swim away now—a mere 425 miles to go, according to the noon-fix and Eric swears upon his sextant that we are aimed in the right direction.

On his chart we have just crossed the track he had followed with 35 ft *PEN DUICK V* last March on the way to single-handed victory in the San Francisco-Tokyo race. "Look boys, I know the way now; see these daily marks? They're my lobster pots, lets go fish 'em up for dinner.

Saturday, 12th July. The final rush is on and the helm must be getting red-hot as everyone vies for the higher score on the log. The wind lacks guts, but the record may still be ours if we keep pressing on. Never in the history of men have so many sail trimmings owed to so few . . .

6.30 p.m. Action! A sudden rainsquall sends us smoking along at 18 knots steady, on a broad reach. Leeward pontoon under, linking struts awash, *PEN DUICK* digs up a fascinating furrow through the boiling seas. Clutching the tiller with both hands, Eric smiles at the flailing spray and pounding crests.

11.45 p.m. An unmistakable halo beams through the night and leads us across Molokai Channel. Honolulu soon glitters out of the sea, fills up the darkness with lights, shapes and hopes. A landfall is so full of meaning, expectancy. The red light off Diamond Head shows us through the finishing line. Three cheers for the skipper and down with the kite!

The skipwatch reads 0257—we have crossed in eight days and 13 hours, averaging 11 knots. *WINDWARD PASSAGE*, the dreaded and much admired leader of the Transpac fleet, has still got another 20 hours to go as *PEN DUICK IV* sets a new mark some 24 hours ahead of *TICONDEROGA*'s record. Eric Tabarly may well be proud of his weird aluminium flyer.

ROYAL WESTERN YACHT CLUB OF ENGLAND

Rules and Conditions of Entry for the Fourth Observer Single-Handed Transatlantic Race from Plymouth to Newport, R.I. for The Observer Trophy, 1972

Awards

The Observer Trophy will be awarded to the winning crew.

Two smaller trophies will be awarded to the crews of the monohull and multihull yachts winning their respective handicaps.

Other prizes may be awarded according to the number of entries.

RULES AND CONDITIONS OF ENTRY

Organisation

1. The Race will be organised by the Royal Western Yacht Club of England.

Object

2. The Race is intended to be a sporting event, and to encourage the development of suitable boats, gear, supplies and technique for single-handed ocean crossings under sail.

Awards

3. The Observer trophy will be presented to the competitor judged to be the winner to be retained by him in his permanent possession.

A smaller trophy will be awarded to the competitor judged to be the winner on handicap of the monohull yachts.

A second smaller trophy will be awarded to the competitor judged to be the winner on handicap of the multihull yachts.

Other prizes may be awarded according to the number of entries.

Date

Date of start, and related dates, are subject to confirmation.

Course

5. To the Finishing line off Newport, Rhode Island, by any route, leaving the Nantucket Light Vessel to starboard.

Entries

6. An entry will consist of a sailing boat (hereafter called the 'yacht') plus a named crew of one person only (the 'crew'). The crew must be over 21 years of age, but need not be the owner of the yacht, and may be man or woman, amateur or professional.

7. Entries will be made under the nationality of the crew. The yacht need not have been designed or built in that Country.

8. If it is desired to nominate a reserve crew, he must be named on the original application and must submit evidence that he has qualified separately exactly as in Rule 13. A reserve crew may not take over the yacht during the race without returning to the starting line. The full course must be sailed by one person only.

9. Entries may be sponsored and/or financed by another person, body or organisation. The R.W.Y.C. of E. are not averse to the sponsoring of entries and are indeed glad of the help that has been given to the competitors in the previous Races, which undoubtedly added to the interest in them. Nevertheless they are concerned that this Race should remain a sporting event and reserve the right to refuse an entry if it appears that the primary object of it is to promote a commercial project not connected with the object of the Race.

In particular a yacht owned or sponsored wholly or partly by a group or organisation may not display any emblem or wording that relates specifically to such sponsor other than a house flag whose largest dimension must not be more than 5% of the yacht's overall length and whose design may not incorporate any wording.

The Committee will give an advance ruling on request as to the application of this Rule in any particular case.

10. Each intending entrant should apply in writing to the Sailing Secretary, R.W.Y.C. of E. by 17th April, 1972. The application should include:

- (a) The attached entry form completed.
- (b) Cheque or money order for entry fee (Rule 12).
- (c) Evidence of qualification (Rule 13).

The qualifying passage (Rule 13) must have been successfully completed before submitting the application and, in view of the possibility of delay or the necessity for a second attempt, crews are strongly advised to qualify by the end of 1971 and to submit their application early.

Applicants whose entry is not accepted by the Committee will be informed of the reason as soon as possible and their entry fee returned. They will then be free to make a fresh application if able to satisfy the Committee's objection before 17th April, 1972.

An applicant whose application is approved by the Committee will be accepted as a provisional entry.

Every provisional entry must enter the Inner basin of Millbay Dock, Plymouth, by the evening of Monday, 12th June and remain there until he

receives his acceptance certificate (Rule 27). His yacht must be ready in all respects for inspection on a.m. Tuesday, 13th June.

The Committee will be ready to start inspecting any entries who desire it on Monday, 12th June.

Any entry who has not been accepted by 1200 on Friday, 16th June will be subject to a delayed start under Rule 29.

11. Entries will close on 17th April, 1972. No entrance fee will be returned after this date.

Entrance fee

12. Entrance Fee will be £20.

Evidence of qualification

13. Before making his application the entrant must have completed a singlehanded qualifying cruise of not less than 500 miles of open sea without anchoring or putting into Port. This cruise must be made in the yacht in which he will sail in the Race, and he may not be escorted at any stage by any other yacht or vessel.

A crew who has been an official finisher in a previous Singlehanded Transatlantic Race need not qualify again, nor need the yacht if it is to be sailed by the same crew without substantial alterations. However, any other yacht which he proposes to sail in the Race must undergo a qualifying cruise as above, being sailed by one person who need not necessarily be the competitor.

Owing to the danger to navigation, passages in the Channel or other congested areas will not be acceptable. Cruises should be planned to avoid shipping lanes, and sailing in pilotage waters restricted to the time that the crew can keep a proper look out.

The entrant must submit a log of his qualifying cruise showing his course, daily progress etc., together with supporting evidence such as evidence of departure and arrival.

14. The entrant must fill in on the entry form details of his experience in Ocean Racing and/or Offshore Cruising. This Rule is not applicable to a crew who has been an official finisher in a previous Singlehanded Transatlantic Race.

15. In the event of any entrant being found to have made a false statement his entry will be refused and his fee forfeit.

Passport and visa

16. Entrants will be required to furnish themselves with, and produce before the Race, valid documents for entry into the U.S.A.

17. Entrants should also provide for an adequate amount of dollar currency to meet their requirements after arrival in the U.S.A. It should not be assumed that there is any easy way of selling the boats quickly or of earning money from story or broadcasting rights.

Eligibility of yachts

18. Yachts of any size or type may enter, subject to the decision of the organisers. It is not their desire to exclude yachts solely on the grounds of unconventional design, but a person contemplating entering an extreme type, either by reason of its size or other features, would be well advised to give particulars of the yacht at an early stage so as to avoid later disappointment.

It is unlikely that the Committee will admit a yacht of less than 20 feet overall on deck.

Winner

19. The Winner will be the first yacht to cross the finishing line having fulfilled the conditions of the Race. There will be no handicapping for the major award.

Handicap

20. Single and multi-hulled yachts will each be eligible for separate awards for the fastest corrected time on handicap. The method of handicap will in each case be decided by the Committee.

Engines

21. No means of propulsion may be employed other than the force of the wind, the man-power of the crew, or both.

22. An internal combustion engine, which must be incapable of being used to propel the yacht, may be used to generate electricity for lighting or radio, but NOT for operating self-steering gear, nor for handling sails or ground tackle. This engine may be the yacht's auxiliary engine, provided that the propellor has been removed, or the shaft sealed before the start.

Where this is impracticable, and the crew wishes to retain his propellor in situ, this will be allowed, provided that he carries only sufficient fuel for battery charging and that he signs a declaration at the finish to the effect that the engine has not been used for other purposes, except that it may be used for entering and leaving harbour, instead of being towed, within the limits set out in Paragraph 31.

Recognition

23. A distinguishing number must at all times be prominently displayed on the yacht's hull, deck and sails. This number will be allocated to the entrant by the Organising Committee. There must not be any other number displayed.

Responsibility

24. Yachts must be fully independent and capable of carrying out their own emergency repairs at sea. Crews have no right to expect or demand rescue operations to be launched on their behalf.

25. Full responsibility for any mishap will rest with the owner or crew under ordinary processes of law. The Organisers do not accept any responsibility towards the entrants, nor towards third parties with whom the entrants may become involved.

Inspection

26. Although no stipulations (except as stated elsewhere in these Rules) will be made as to design, construction, rig or equipment of yachts, each yacht, will be required to pass two inspections after she has arrived in Millbay Dock (Rule 10).

a **Condition Inspection** by a surveyor appointed by the Organisers. This is to verify that the hull, decks, spars, rigging, sails, ground tackle, fittings and sailing equipment are in good serviceable condition.

b **Safety and Rule Inspection** by at least two of the Committee, assisted as required by a qualified surveyor. This is to inspect the safety equipment as listed in Rule 30, to see that the Rules have been complied with, and also to examine any other part of the yacht's design, construction or equipment which they consider to bear directly on the safety of yacht or crew. A current inspection certificate will be required in respect of the Life Raft.

In the event of there being some doubt as to the structural soundness of the yacht the Committee may require a drop test to be carried out.

Acceptance certificate

27. As soon as possible after passing the inspections the crew will be issued with an Acceptance Certificate (Rule 10). Without this he will not be allowed to sail in the Race or, if he does, will be disqualified. It is the responsibility of the crew to obtain this certificate from the Organiser before his yacht leaves Millbay Dock.

Yachts failing to pass inspection

28. As soon as possible after each of the inspections the crew will be notified in writing of any respect in which the yacht has failed to pass inspection. He will then be free either to remedy the defects and ask for a further inspection, or to accept disqualification.

29. Late arrivals and yachts which have failed to pass either of the initial inspections will not be inspected, or re-inspected as the case may be, until after the start of the Race and so will automatically have to start 24 hours or more behind the others.

However minor omissions or discrepancies may be allowed for at the discretion of the Committee provided they are made good and brought to the notice of the Committee by 1200, Friday, 16th June.

Yachts that have obtained the above mentioned Certificate will be free to leave Millbay Dock provided they are prepared to make their own arrangements to get to the Start Line.

There will however be a briefing conference on Thursday, morning, 15th June, which all entries and any reserve crews will be required to attend.

Safety equipment

30. The crew will be required to carry certain safety equipment, as listed below, throughout the Race, and to maintain it in serviceable condition.

Self-inflating Life Raft, to be yellow and canopied.

Pyrotechnic Distress Signals—Orange by day (smoke)

Red by night.

Survival Beacon
Foghorn

2 Fire Extinguishers
Radar Reflector.

Outside assistance

31. No physical contact, except for the passing of written messages, may be made with other ships or boats at sea, and no stores may be received from any ship or aircraft during the Race. They may however be asked for advice or information, and to report the yacht's position and condition.

32. During the Race a yacht may put in anywhere and anchor or moor for any purpose. She may be towed for a distance not exceeding two miles into, and for a distance not exceeding two miles out of, any such harbour or anchorage, provided that the total result of such towage can be shown not to have advanced the yacht towards the finish. When actually moored or anchored, other people may come aboard, stores or equipment may be embarked, and repairs effected.

33. Yachts must sail the whole course independently and may not deliberately escort each other or arrange any other escort.

Radio transmission and reception

34. Use of the following is prohibited:

- (a) Radar.
- (b) Hyperbolic navigational aids (consol and direction finding are permitted).
- (c) Prearranged transmissions for the use of individual competitors.

Declaration

35. Immediately after finishing each crew will be required to sign a declaration that he has sailed the Race in accordance with all published Rules, or if any Rule has been broken to give a full account of the circumstances, establishing to what, if any, extent the yacht's progress towards the finish was helped by the breach in question.

The declaration must be accompanied by a list of the yacht's daily positions for every day of the Race. These positions may be freely published by the organisers and sponsors of the Race, and may be shown by them on request to any other competitor.

Finishers

36. In order to qualify as a finisher a yacht must finish not later than 16th August, 1972.

Authority

37. These Rules, dated 5th December, 1968, are published by the Royal Western Yacht Club of England who reserve the right to amend, or add to, the Rules at any time up to the start of the Race, such amendments being immediately promulgated to all entrants who have been provisionally accepted. Additional instructions will in any case be issued by the Organisers to cover details of the starting and finishing arrangements.

ROYAL WESTERN YACHT CLUB OF ENGLAND OBSERVER SINGLE-HANDED TRANSATLANTIC RACE, 1972

Form of entry

To: The Sailing Secretary, Royal Western Yacht Club of England, Plymouth.

Name of Yacht.....Rig.....

Registered Number.....Flag of Registry or Nationality.....

Type.....Single Hull/Trimaran/Catamaran.....Hull Colour.....

Displacement..... LOA.....LWL.....Beam.....Draught.....

Owner

Address

Crew's Name.....

Crew's Address.....

I (name of crew)..... DECLARE that

I am over the age of 21 years and that I wish to enter the above yacht for the Singlehanded Transatlantic Race and in the event of my entry being accepted I agree (a) that the sponsors and organisers of the Race shall have no liability either to me or my estate for any accident or loss arising consequent upon my entry and participation in the said Race and (b) to indemnify the sponsors and organisers of the Race in respect of any liability or loss whatsoever and howsoever arising consequent upon my entry and participation in the said Race whether such liability or loss shall be incurred in respect of myself, the yacht, third parties, another entrant in the Race or in any other respect.

I accept the jurisdiction of the Organisers on all matters to do with the eligibility and disqualification.

I accept the jurisdiction of the Organisers on all matters to do with trophies and awards.

I agree to assist the Organisers by doing all I can to send back position and condition reports during the course of the Race.

I enclose herewith the sum of.....being my entrance fee

Signed.....

Witness

Address of Witness.....

.....

Occupation of Witness.....

Date

(Particulars of Sailing Experience to be written on the back of this form).

APPENDICES

I. RULES FOR THE 1964 OSTAR

ROYAL WESTERN YACHT CLUB OF ENGLAND, PLYMOUTH

Rules and Conditions of Entry for the Second Single-Handed Trans-Atlantic Race, Plymouth to New York, 23rd May, 1964

Awards

A Special Trophy will be awarded to the Winner.

A Smaller Trophy may be awarded to the Yacht winning on Handicap.

Other prizes may be awarded according to the number of entries.

RULES AND CONDITIONS OF ENTRY

Organisation

1. The Race will be organised by the Royal Western Yacht Club of England.

Object

2. The race is intended to be a sporting event, and to encourage the development of suitable boats, gear, supplies and technique for single-handed ocean crossings under sail.

Awards

3. A trophy will be presented to the competitor judged to be the winner, to be retained by him as his permanent possession.

If sufficient entries are received, a smaller trophy will be awarded to the yacht winning on handicap. Other prizes may be awarded according to the number of entries.

Date

4. The start will be from Plymouth, England, on Saturday, May 23rd, 1964.

Course

5. By any route to the finishing line.

Entries

6. An entry will consist of a sailing boat (hereafter called "the yacht") plus a named crew of one person only ("the crew"). The crew must be over 21 years of age, but need not be the owner of the yacht, and may be man or woman, amateur or professional.

7. Entries will be made under the nationality of the crew. The yacht need not have been designed or built in that country.

8. Entries may be sponsored and/or financed by another person, body or organisation.

9. Each intending entrant should apply in writing to The Secretary, Royal Western Yacht Club of England, enclosing cheque or money order for his entrance fee (Rule 10), made payable to the Secretary, Royal Western Yacht Club.

Entrance fee

10. The entrance fee will be £15 0s. 0d.

Evidence of qualification

11. An entrant must have completed a single-handed qualifying cruise of a nature to satisfy the organising committee, or, alternatively, must furnish a Certificate of Competence. This will be accepted in lieu of Evidence of Qualification, provided that it is signed by a Flag Officer of an established Yacht Club or other competent body known and approved by the Organisers. The Certificate must say of the competitor that he/she "is in my opinion competent to undertake a long single-handed ocean passage in a small yacht."

Passport and visa

12. Entrants will be required to furnish themselves with, and to produce before the race, valid documents for entry into the U.S.A.

13. Entrants should also provide for an adequate amount of dollar currency to meet their needs after arrival in the United States. It should not be assumed that there is any easy way of selling the boats quickly or of earning money from story or broadcasting rights.

Eligibility of yachts

14. Yachts of any size or type may enter, subject to the decision of the Organisers. (It is not their desire to exclude yachts solely on grounds of unconventional type or design).

The winner will be the first yacht to cross the finishing line having fulfilled the conditions of the Race. There will be no handicapping for the major award.

Subject to there being sufficient entries, yachts of conventional hull design will be eligible for an award for the fastest corrected time on handicap. Catamarans and other vessels with multiple hulls, outriggers, etc. will only be eligible to compete for the major award.

Handicap

15. The handicap will be based on the formula $\frac{\sqrt{L} + 2}{10}$ where L is, as, that used in the RORC rating formula.

16. No means of propulsion may be employed other than the force of the wind, the man-power of the crew, or both.

17. An internal combustion engine, which must be incapable of being used to propel the yacht, may be used to generate electricity for lighting or or radio, but NOT for operating self-steering gear, nor for handling sails or ground tackle. This engine may be the yacht's auxiliary engine, provided that the propeller has been removed, or the shaft sealed before the start.

Where this is impracticable, and the crew wishes to retain his propeller in situ, this will be allowed, provided that he only carries sufficient fuel for battery charging and that he signs a declaration at the finish to the effect that the engine has not been used for other purposes except that it may be used for entering and leaving harbour, instead of being towed, within the limits set out in Paragraph 22.

Inspection

18. Each yacht will be open to inspection by the Organisers, and by other entrants, at a specified time before the start, and again immediately after the finish.

19. **Condition Inspection.** Although no stipulations (except as stated elsewhere in the rules) will be made as to design, construction, rig, or equipment of yachts, each yacht will be required to pass a "Condition Inspection," after she is afloat, and equipped with all essential sailing equipment for the race. The inspection may be carried out by any practising Marine Surveyor, at the entrant's expense, not earlier than 15th March, 1964. Alternatively, it may be carried out at the Organisers' expense at Plymouth, by a Surveyor to be appointed by the Organisers, not earlier than 11th May, 1964. The results of such inspection will be recorded in the following form:—

"I/We hereby certify that I/we have today inspected the yacht.....
(name, port, number, etc.)..... lying afloat at.....
rigged and equipped with all essential sailing equipment (including navigational equipment) which..... (name of entrant) proposes to
carry and use in the Single-Handed Atlantic Race. Insofar as it was possible
to inspect them, I/we consider that the hull, decks, spars, rigging, sails,
ground tackle, fittings and sailing equipment appeared to be in a good and
serviceable condition, except for the following items.....
(delete if necessary)." This certificate must reach the Organisers not later
than 10 a.m. on Thursday, the 21st May, 1964. If any item has failed to pass
the inspection, the crew will be responsible for obtaining a further certificate,
from the Organisers' Surveyor at Plymouth, that the items have been satis-
factorily repaired or replaced. Failure to satisfy this rule will result in dis-
qualification before the start.

Safety equipment

20. The crew will be required to carry certain safety equipment, as listed below, throughout the race, and to maintain it in serviceable condition.

Inflatable Life Raft
Radar Reflector
Foghorn
Daylight Distress Signals
Flares and Pyrotechnic Distress Signals

Outside assistance

21. No physical contact, except for the passing of written messages, may be made with other ships or boats at sea, and no stores to be received

from any other ship during the race. They may, however, be asked for advice or information, and to report the yacht's position and condition.

22. During the race, a yacht may put in anywhere, and anchor or moor for any purpose. She may be towed to a distance not exceeding two miles into, and for a distance not exceeding two miles out of, any such harbour or anchorage, provided that the total result of such towage can be shown not to have advanced the yacht towards the finish. When actually moored or anchored, other people may come aboard, stores or equipment may be embarked, and repairs effected.

Responsibility

23. Yachts must be fully independent, and capable of carrying out their own emergency repairs at sea. Crews have no right to expect or demand rescue operations to be launched on their behalf.

24. Full responsibility for any mishap will rest with the owner or crew under ordinary processes of law. The Organisers do not accept any responsibility towards the entrants, nor towards third parties with whom the entrants may become involved.

Recognition

25. A distinguishing number should at all times be prominently displayed on the yacht's hull and sails. This number will be allocated to the entrant by the Organising Committee.

Declaration

26. Immediately after finishing, each crew will be required to sign a declaration that he has sailed the race in accordance with all published rules, or, if any rule has been broken, to give a full account of the circumstances, establishing to what, if any, extent the yacht's progress towards the finish was helped by the breach in question.

Finishers

27. In order to qualify as a finisher, a yacht must finish not later than 1st September, 1964.

Authority

28. These rules, dated 1st January, 1962, are published by the Royal Western Yacht Club of England, who reserve the right to amend, or add to, the rules at any time up to the start of the race, such amendments being immediately promulgated to all entrants who have been provisionally accepted. Additional instructions, will, in any case, be issued by the Organisers to cover details of the starting and finishing arrangements.

ROYAL WESTERN YACHT CLUB OF ENGLAND, PLYMOUTH

Sailing Instruction for The Observer Trophy Single-Handed Trans-Atlantic Race, Plymouth to Newport, R.I., 1964

Awards

1st Prize. THE OBSERVER TROPHY to the first Yacht to cross the finishing line.

2nd Prize. A smaller Replica of the above to the second Yacht to cross the finishing line.

Handicap. A special prize presented by THE OBSERVER to the Yacht winning the handicap event on corrected time. A miniature of THE OBSERVER TROPHY will be presented to all other Yachts that complete the course within the time limit. All awards are subject to the Rules and Conditions of the Race having been complied with.

Start. 1000 B.S.T., 23rd May, 1964.

Class Flag. International Code Pennant Numeral 1 must be flown at the start and when approaching and crossing the finishing line.

Race No. The Yacht's Race Number must be painted on both sides of the Hull and painted or displayed on deck.

Start. Ten minute Gun and Numeral 1. Five minute Gun and Flag P. Starting Gun and both hauled down.

Starting Line. The Committee Boat will be moored West of Melampus Buoy. The Starting Line is the extension of the line from the Committee Boat's mast through the Melampus Buoy.

Recalls. There will be no recalls, but if a Yacht passes the line before the starting signal she will be penalised 10 minutes per second over the line.

Course. Cross the Starting line from North to South. Leave Melampus Buoy to Starboard and Distance Mark to Port. Thence to Newport, passing South of Nantucket.

Finish. The Finishing Line is between Brenton Reef Tower and Brenton Reef Whistle Buoy.

Rules. The Race will be run under the Special Rules of the Royal Western Yacht Club. Throughout the Race, including the Start and Finish, the International Regulations for prevention of collision at sea will apply.

Rule Infringements. If a Yacht infringes the Rules the Crew shall state the circumstances in his Declaration Form at the Finish. If the Race Committee of the Royal Western Yacht Club consider that a gross breach or infringement of the Rules has been committed they may disqualify the Yacht or impose a time penalty.

Declarations. A Declaration Form completed and signed by the Crew must be handed in to the Ida Lewis Yacht Club as soon as possible after arrival. If no declaration is made a Yacht may be treated as having failed to complete the Race.

Protests. Protests arising out of the Race must be made in writing and sent by air mail to the Hon. Secretary of the Royal Western Yacht Club, Plymouth, within 48 hours of arrival in Newport.

Yachts putting into Port or giving up must notify the Royal Western Yacht Club immediately. Telegrams Dolphin Plymouth. Telephone Plymouth 60077. When leaving a Port the same will apply.

II. RULES FOR THE 1968 OSTAR

Rules and Conditions of Entry for the Third Single-Handed Trans-Atlantic Race for The Observer Trophy, Plymouth to Newport, R.I. 1st June, 1968

Awards

The Observer Trophy will be awarded to the Winner.

A Smaller Trophy will be awarded to the Yacht winning on Handicap.

Other prizes may be awarded according to the number of entries.

Organisation

1. The Race will be organised by the Royal Western Yacht Club of England.

Object

2. The race is intended to be a sporting event, and to encourage the development of suitable boats, gear, supplies and technique for single-handed ocean crossings under sail.

Awards

3. A trophy will be presented to the competitor judged to be the winner, to be retained by him as his permanent possession.

If sufficient entries are received, a smaller trophy, will be awarded to the yacht winning on handicap. Other prizes may be awarded according to the number of entries.

Date

4. The start will be from Plymouth, England, on Saturday, 1st June, 1968.

Course

5. From Plymouth to Newport, R.I., passing South of Nantucket.

Entries

6. An entry will consist of a sailing boat (hereafter called "the yacht") plus a named crew of one person only ("the crew"). The crew must be over 21 years of age, but need not be the owner of the yacht, and may be man or woman, amateur or professional.

7. Entries will be made under the nationality of the crew. The yacht need not have been designed or built in that country.

8. Entries may be sponsored and/or financed by another person, body or organisation.

9. Each intending entrant should apply in writing to the Hon. Secretary, Royal Western Yacht Club of England, enclosing cheque or money order for his entrance fee (Rule 10), made payable to the Hon. Secretary, Royal Western Yacht Club.

Entrance fee

10. The entrance fee will be £15 0s. 0d.

Evidence of qualification

11. An entrant must have completed a single-handed qualifying cruise consisting of a passage of not less than 500 miles at sea without anchoring or putting into port.

The entrant must submit a log of his qualifying cruise showing his courses, daily progress, etc., together with supporting evidence such as evidence of departure and arrival. This does not apply to those who took part in the 1964 Race.

In the event of any entrant being found to have made a false statement, his entry will be refused and his fee forfeit.

Passport and visa

12. Entrants will be required to furnish themselves with, and to produce before the race, valid documents for entry into the U.S.A.

13. Entrants should also provide for an adequate amount of dollar currency to meet their needs after arrival in the United States. It should not be assumed that there is any easy way of selling the boats quickly or of earning money from story or broadcasting rights.

Eligibility of yachts

14. Yachts of any size or type may enter, subject to the decision of the organisers. It is not their desire to exclude yachts solely on the grounds of unconventional type or design, but a person contemplating entering an extreme type, either by reason of its size or other features, would be well advised to give particulars of the yacht at an early stage so as to avoid later disappointment.

The winner will be the first yacht to cross the finishing line having fulfilled the conditions of the Race. There will be no handicapping for the major award.

Subject to there being sufficient entries, yachts of conventional hull design will be eligible for an award for the fastest corrected time on handicap. Catamarans and other vessels with multiple hulls, outriggers etc., will only be eligible to compete for the major award.

Handicap

15. The handicap will be based on the formula $\frac{\sqrt{L} + 2}{10}$ where L is, as that used in the RORC rating formula.

16. No means of propulsion may be employed other than the force of the wind, the man-power of the crew, or both.

17. An internal combustion engine, which must be incapable of being used to propel the yacht, may be used to generate electricity for lighting or radio, but NOT for operating self-steering gear, nor for handling sails or ground tackle. This engine may be the yachts auxiliary engine, provided that the propellor has been removed, or the shaft sealed before the start.

Where this is impracticable, and the crew wishes to retain his propeller in situ, this will be allowed, provided that he only carries sufficient fuel for battery charging and that he signs a declaration at the finish to the effect that the engine has not been used for other purposes except that it may be used for entering and leaving harbour, instead of being towed, within the limits set out in Paragraph 22.

Inspection

18. Each yacht will be open to inspection by the Organisers, and by other entrants, at a specified time before the start, and again immediately after the finish.

19. **Condition Inspection.** Although no stipulations (except as stated elsewhere in the rules) will be made as to design, construction, rig, or equipment of yachts, each yacht will be required to pass a "Condition Inspection," after she is afloat, and equipped with all essential sailing equipment for the race. The inspection may be carried out by any practising Marine Surveyor, at the entrant's expense, not earlier than 15th March, 1968. Alternatively, it may be carried out at the Organisers' expense at Plymouth, by a Surveyor to be appointed by the Organisers, not earlier than 18th May, 1968. The results of such inspection will be recorded in the following form:

"I/We hereby certify that I/We have today inspected the yacht..... (name, port, number, etc.)..... lying afloat at..... rigged and equipped with all essential sailing equipment (including navigational equipment) which..... (name of entrant) proposes to carry and use in the Single-Handed Atlantic Race. Insofar as it was possible to inspect them, I/We consider that the hull, decks, spars, rigging, sails, ground tackle, fittings and sailing equipment appeared to be in a good and serviceable condition, except for the following items..... (delete if necessary)." This certificate must reach the Organisers not later than 10 a.m. on Thursday, 28th May, 1968. If any item has failed to pass the inspection, the crew will be responsible for obtaining a further certificate, from the Organisers' Surveyor at Plymouth, that the items have been satisfactorily repaired or replaced. Failure to satisfy this rule will result in disqualification before the start.

Safety equipment

20. The crew will be required to carry certain safety equipment, as listed below, throughout the race, and to maintain it in serviceable condition.

Inflatable Life Raft

Radar Reflector

Foghorn

Daylight Distress Signals

Flares and Pyrotechnic Distress Signals

Fire Extinguisher

Outside assistance

21. No physical contact, except for the passing of written messages, may be made with other ships or boats at sea, and no stores to be received from any other ship during the race. They may, however, be asked for advice or information, and to report the yacht's position and condition.

22. During the race, a yacht may put in anywhere, and anchor or moor for any purpose. She may be towed to a distance not exceeding two miles into, and for a distance not exceeding two miles out of, any such harbour or anchorage, provided that the total result of such towage can be shown not to have advanced the yacht towards the finish. When actually moored or anchored, other people may come aboard, stores or equipment may be embarked, and repairs effected.

Responsibility

23. Yachts must be fully independent, and capable of carrying out their own emergency repairs at sea. Crews have no right to expect or demand rescue operations to be launched on their behalf.

24. Full responsibility for any mishap will rest with the owner or crew under ordinary processes of law. The Organisers do not accept any responsibility towards the entrants, nor towards third parties with whom the entrants may become involved.

Recognition

25. A distinguishing number must at all times be prominently displayed on the yacht's hull and sails. This number will be allocated to the entrant by the Organising Committee. There must not be any other number displayed.

Declaration

26. Immediately after finishing, each crew will be required to sign a declaration that he has sailed the race in accordance with all published rules, or, if any rule has been broken, to give a full account of the circumstances, establishing, to what, if any, extent the yacht's progress towards the finish was helped by the breach in question.

Finishers

27. In order to qualify as a finisher, a yacht must finish not later than 31st July, 1968.

Authority

28. These rules, dated 24th November, 1964, are published by the Royal Western Yacht Club of England, who reserve the right to amend, or add to, the rules at any time up to the start of the race, such amendments being immediately promulgated to all entrants who have been provisionally accepted. Additional instructions, will, in any case, be issued by the Organisers to cover details of the starting and finishing arrangements.

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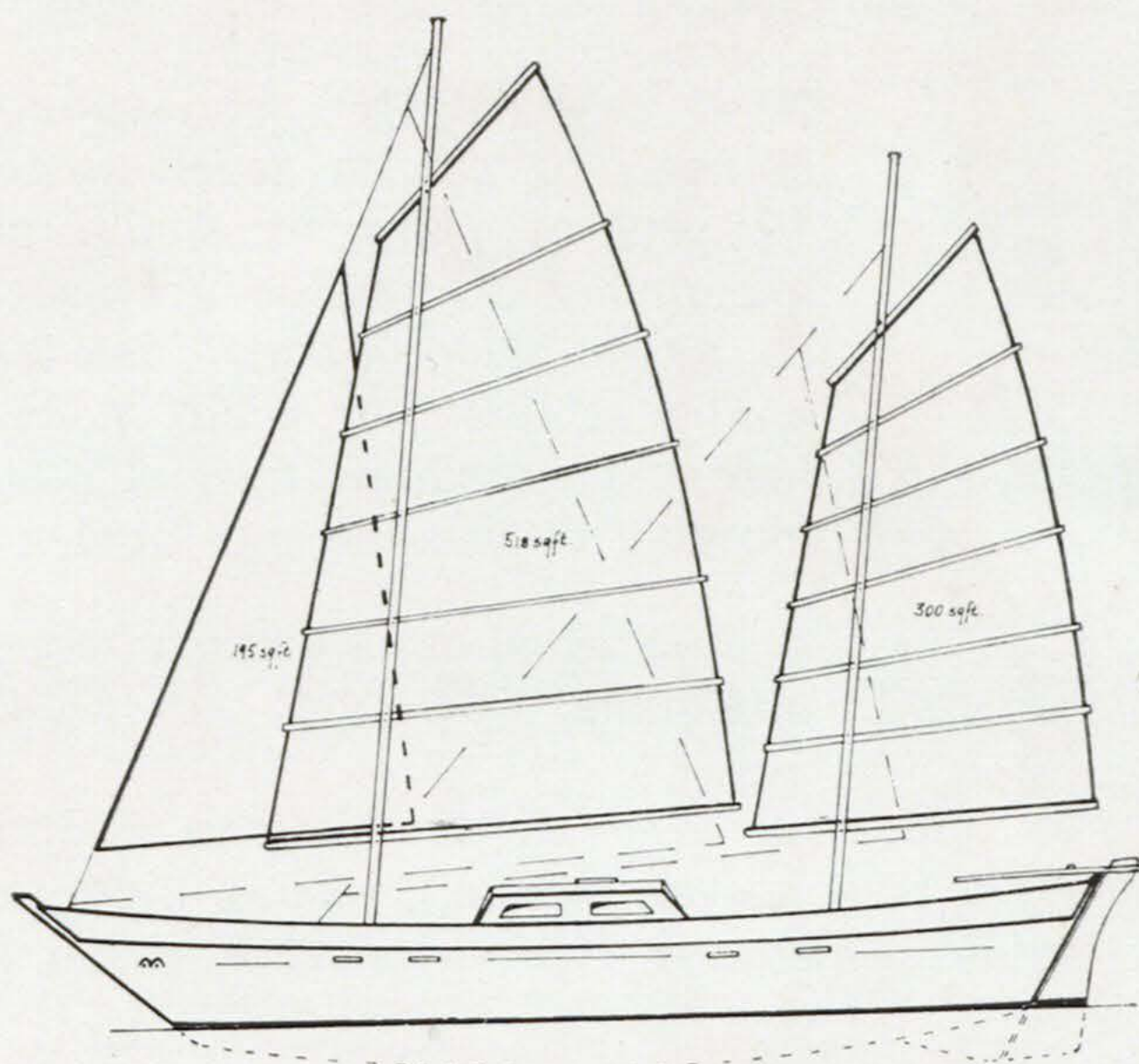
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| 5 Sailing Hull Design | 45 Basic Research |
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| 36 Floats, Foil and Fluid Flows | |
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| 38 Catamarans 1961 | |
| 39 Trimarans 1961* | |
| 40 Yacht Research 1 | |
- * These publications are
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Some of the above publications are out of print at present. Please write for the current list to:

The Amateur Yacht Research Society,
Woodacres, Hythe, Kent, England.