

THE

SAILORMAN



June 1979

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Advertising Rates

3	Quarter page	£15
4	Half page	£30
7	Whole page	£50
9	Back page	£55
10	Published twice yearly in May and December	
15	Copy: 1st of month preceeding publication date	
16		
17	SMALL ADS FREE TO PCA MEMBERS	
20		
24	All articles Copyright of 'The Sailorman'	
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27	COVER PHOTO:	

Nick Armstrong
Quest drying out after a wet days ride

THE SAILORMAN



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High Street Brompton Gillingham Kent

A word in your ear

IN THE WAKE OF THE SAILORMAN — was selling well at the London Boat Show. It is a selected compilation of all our out of print Sailorman. It is a must for all newcomers to Polycat building and sailing, since it is written from first hand experience of building, sailing, fitting out, rigs, engine installations, heavy weather sailing, self steering and navigation, by PCA members. That covers most things to do with owning a Polycat. If you have any further ideas on any of these subjects or others, perhaps dear members, you will write a line or two to the Editor, so that eventually we may compile another book. It costs £3. PCA members may have their first copy at £2 (plus post — 20p UK and Eire, 50p Europe, £1 airmail for overseas). These are available from our new secretary Anthea Evans.

On behalf of the PCA, I would like to welcome Anthea aboard. She is no newcomer to Polycats, as she is the wife of our illustrious chairman who recently gave a lecture to the AYRS on the breakages that occurred during the last Whitbread Around The World Race. This was later published in Yachting World.

And a word or two of thanks to Robin Fautley who has worked very hard without respite or reward as secretary last year. I am told it was a full time job rather than a part time one. Many thanks for your worthy contribution.

POLYCATS, The Eastern Canadian PCA newsletter continues to flourish. Roly Huebsch is the area secretary, 214 Glebemount Avenue, Toronto, Ontario, Canada M4C 3T4. Roly has done many of the fine illustrations in the Sailorman.

Seasickness is a thing that affects most people, except the very fortunate few. Remedies consist of doing nothing or taking a variety of drugs, many of which make one drowsy. There is another remedy — take vitamin B6. It is a natural requirement of the body and does no harm. Maggie used it last year with great success. Recently we read of B6 again in WIND VANE — “the bulletin of seasteading and self sufficiency afloat”, written and produced by those around Jim Brown who cruise and live on his SEARUNNER trimarans.

“Working multihull sailing craft for the third world”, is a theme that has occurred several times in the yachting press recently. The idea is not new, although the building technology would be. My formative years were spent in Kenya and on the coast the fishermen used log canoes with outriggers, and lateen sails, which were an influence from the Arab dhows. Of the various forms of multihull, a catamaran has a lot to offer, especially a Polynesian Catamaran. It has masses of deck space, plenty of stability and V hull which has load carrying ability plus retaining its speed capability. Nearer home, Wade and Jan Doak of New Zealand have used a 36' Raka for research on dolphins (see Dolphins games).

I will have been at the helm of the SAILORMAN for five years by the time the next AGM comes around in January 1980. I think that I shall retire then. In the meantime I shall like to hear from anyone with a creative bent and enthusiasm, who might like to take over. As the Secretary and Chairman are both in South Wales it would help committee matters if the Editor lived over that way, but this is not essential. Anyone interested should contact me soon.

Richard Bumpus



The Journal of

THE POLYNESIAN CATAMARAN ASSOCIATION



Association News

LAKE ONTARIO SAIL-IN 1978 by Roly Huebsch

The PCA Lake Ontario Sail-in was held on the weekend of August the 19th and 20th. We had five Polycats sailing: Alf Hicksons Maui MANU REVA, Ernie Heard's Hina CARIAD (late David & Neila's LITTLE BOAT), Harry Ellis's Raka LANAO, John Bellenger's Oro PYXIS and our own Hina HUAHEINE. We had a crowd of over forty men women and children, some from as far as 800 miles away.

The weather forecast was not promising on the Saturday, rain and thunder squalls, but at noon, the scheduled assembly time, the weather was dry with a brisk SW wind.

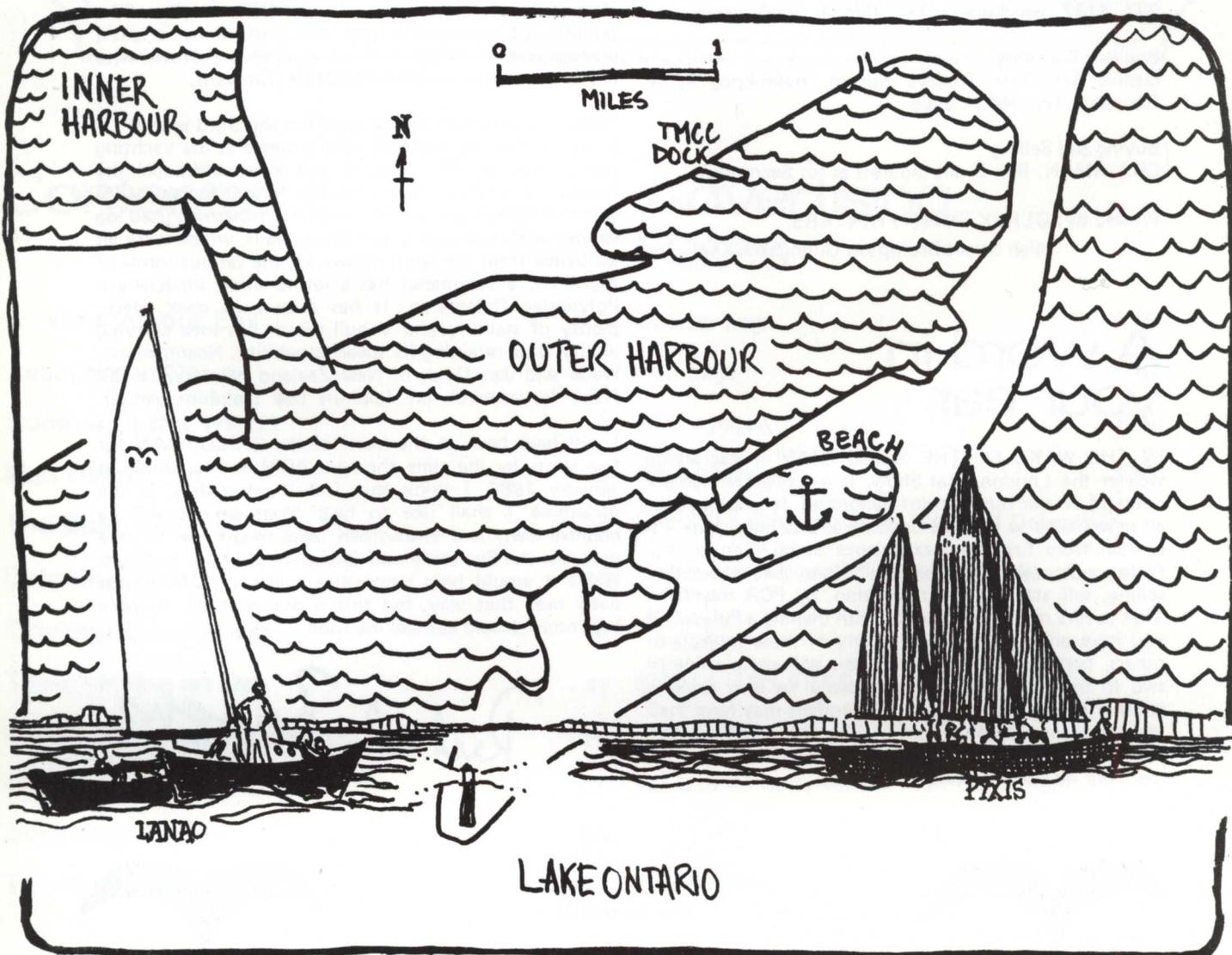
PYXIS motor was out of action so she anchored a couple of hundred feet off the dock and three Hinas full of passengers were ferried out to her. Then the five

boats beat down the harbour and out into the lake giving everyone a great ride in the choppy conditions.

On returning, PYXIS without her engine was unable to enter the lagoon where she moors against the wind so she anchored to wait for a tow from LANAO. In taking the tow aboard, LANAO fouled PYXIS' anchor cable between her skeg and rudder and started to drift down on PYXIS. Some fast work by PYXIS' crew who had to dive into the water and cut and buoy the anchor cable (which was later recovered) saved the day and soon all the boats were in the lagoon where we had planned a barbeque featuring a Polynesian whole roast pig by Becky Ellis. This of course was the moment for the thunder squall to hit and it did!

Plan "B" was put into effect and we all moved to David and Neila's where we got more or less dry and had a marvelous but belated indoor/outdoor barbeque supper.

TORONTO



Day two, the Sunday, was sunny and more relaxed. John Bellenger decided not take PYXIS out again until her motor was repaired but she was open to anyone who wanted to spend some time having a closer look at her.

The HINAs ran a ferry service across the mile and half from the loading dock to the beach and we all just lay around, swam and talked Polycats. Harry took out a couple of excursions on LANAO and the kids had a great time with the dinghys. The day ended as the sun set and we ghosted home over an almost perfectly calm harbour.

Judging by the number of people who have promised to return next year, the sail-in was a great success.

**Guidelines for Assistance of members when voting for
the Committee and Officers (1979)
by P. Strings**

Select the relevant factors and ascertain his or her performance!!!

PERFORMANCE FACTORS	ABILITY	SPEEDINESS	INITIATIVE	STABILITY	COMMUNICATION
FAR EXCEEDS JOB REQUIREMENTS	Leaps tall Buildings with one bound	Is faster than a speeding bullet	Is stronger than a locomotive	Walks on water consistently	Talks with God
EXCEEDS JOB REQUIREMENTS	Must take a running start to leap over tall buildings	Is as fast as a speeding bullet	Is stronger than a bull elephant	Walks on water in emergencies	Talks with the Angels
MEETS JOB REQUIREMENTS	Can leap over short buildings only	Not quite as fast as a speeding bullet	Is stronger than a bull	Washes with water	Talks to himself
NEEDS IMPROVEMENT	Crashes into buildings when attempting to jump over them	Would you believe a slow bullet	Full of bull	Drinks water	Argues with himself
DOES NOT MEET MINIMUM REQUIREMENTS	Cannot recognise buildings at all	Wounds self with bullets when attempting to shoot	Smells like a bull	Passes water in Emergencies	Looses those arguments

It is with regret that we report the loss of LEHAVA HAYAM. Paddy Warren had a very successful voyage from Plymouth to Freetown, W. Africa, where he was to keep the boat. During a gale the Narai broke lose from its mooring and was wrecked on a reef. Apparently a Tane also can adrift, but was washed over the reef with little damage.

LUCKY sails for the West Indies

Two years ago I met Dieter Ludwig and Agnes aboard their Tangaroa LUCKY at Colinjesplaat on the Ooster Schelde. LUCKY had been launched six weeks, after having been bought and rebuilt. Paul van Deenen of Amsterdam who himself sails a Tangaroa NIMANOA, helped sail LUCKY from Lisbon to the Canaries. The trip took seven and half days, averaging 100 miles a day with four days of contrary winds.

Paul takes up the story: Half way through November they left Tenerife bound for Barbados which they reached on December 5 1978. They were then to wander round the Grenadines. By the first part of February they were due in Martinique.

The boat behaves well. The only troublemakers were some of the aids such as the Seafarer electronmagnetic log, the Seacourse autopilot and the Navik wind vane gear. After considerable trouble with the log to start with, it apparently works without problems now. The Seacourse steering motor wore down its carbon brushes after three months occasional use. The Navik uses a very ingenious principle, but the construction is definitely not used to hard continuous labour. Plastics are used everywhere. The maker is Plastimo from France.

Unfortunately these windsteering devices do not work well at high speeds on a broad reach or surfing off a wave. The apparent wind direction changes appreciably or may even become contrary. The vane cannot know this and can generate dangerous rudder actions. One needs a magnetic sensor to control the course.

We now have a Building secretary. Dennis Schneider, D-2242 Busum, Hafenkoog 2, West Germany says he will hold office for one year only as he will be sailing to the West Indies later this year (wise fellow!). He says:

"Being the newly appointed Building Secretary I would like to offer my correspondence with numerous Polycat enthusiasts as a source of information to prospective owner/builders of the larger Wharram designs. However, not being an authority myself, nor wanting to quote anyone without consent, I suggest giving names and addresses to go to for further information on, e.g. the following topics:

1. Sheathing in epoxy vs. GRP vs. ply and marine paints.
2. Weight and draft of Tangaroas.
3. Strandings and smashes, and the question "would you build again".
4. Outboards vs. inboards vs. sails only.
5. Aluminium vs. wooden masts.
6. Preservation technique and experience.
7. Placement of winches and blocks and anchor methods.
8. Galvanised vs. stainless steel.
9. Number of hours spent building.
10. Methods of self steering, or doing without.
11. A racing Tehini (winning mostly)
12. Ketch, sloop, cutter or junk rig.
13. Experiences of living aboard in warm/cold climates on Tangaroas.
14. Seaworthiness of Tangaroas.
15. Costs of building and cruising.
16. Rescue dinghies.
17. Electricity on board.
18. Radios and transceivers.

Unfortunately I wouldn't be able to summarise everything for enquirers, as this would amount to a 'Sailormans Readers Digest'. If you write to me about your problem I'll try to find someone who's gone through the same thing before.

In conclusion I'd like to stress the point that JAMES WHARRAM ASSOCIATES are the first people that you should write to if you are considering alterations or if you don't understand them. I understand my job as locating sources of opinion to compliment the plan and report where the action is."

I hope all this will eventually end up in the Sailorman.
Ed.

Crew Wanted Dennis Schneider our new building secretary is in need of a crew from Falmouth to the Canaries or on to the West Indies in September 1979. No charge except for food. Contact Dennis at D-2242, Hafenkoog 2, West Germany.

Pacific Northwest Summer '78
by Paul Thompson

Summer '78 was the best year for large Polycat sailing in this area, especially around Vancouver. At one stage the city's central Fisherman's terminal had SIX polycats 40' or larger berthed in False Creek. No formal meetings were arranged, but enthusiasts got together throughout the season to talk and sale. Iain Young in Tehini

EARTHLIGHT and Paul Thompson in Oro AOTEA sailed in company in English Bay. Bob Jones launched a beautiful white Oro with an interesting modified VW engine. Eric Smith's Narai ERICSTONE has re-emerged with new paint and motor. Indulus Vanags Narai TIAN IV under new ownership Bill Greenwood is readying for a yearly voyage to the South Pacific. Arne and Flora Baartz were circumnavigating Vancouver Island in their Oro THREE WATERS. This island is about the size of the UK mainland. A French owned Narai left for the South Pacific last September. Word from the Goddards was that Wendy had a new baby making a crew of three, as they sailed from Fiji in KISKADEE. Mark Kary is building a 30' Polycat and should launch this summer. So all told in this jewel of cruising grounds of the Pacific, Polycat sailors are out there living it up and doing it! 1979 willbring more activity. For those who might occasionally get discouraged by costs, bear in mind this phrase from Sterling Hayden's WANDERER (newly in paperback) — A VOYAGE LIKE LIFE MUST BEST BE ON A FIRM FOUNDATION OF FINANCIAL UNREST TO BE TRULY CHALLENGING.

THE A — Z OF CHEAPER BOATING
by Bill Beavis

Published by Stanley Paul
Reviewed by Tony Meakin

If you make your own antifouling from creosote, Jeyes fluid and seagull's eggs the chances are that you have already read this book.

However, if you don't know that one part boiled linseed oil to two parts parafin makes an alternative to tiny expensive bottles of teak oil then this book is full of useful hints and tips for you. Written clearly and simply in an alphabetical format it will help put your hard earned pound notes into your pocket rather than into the yacht chandler's pocket.

The best ideas are usually the simple ones and what could be simpler than stretching uncovered curtain wires across the cooker top as fiddle rails or mixing sawdust and glue as a wood filler.

I wonder if this author's zeal for cheaper boating would be stretched beyond breaking point if I suggest that you borrow a copy from the local library and reduce the cost of your boating by the price of his book!

LAKE ONTARIO SAIL-IN 1979 — AUGUST 18 & 19
from Roly Huelsch
214 Glebemount Ave.,
Toronto, Ontario.
M4C 3T4.

It is to be held in Toronto on Lake Ontario over the weekend of August the 18th and 19th. I think there is quite a bit of interest in the North Eastern United States, people not reached by Polycats. We expect an even bigger and better event than last year with several more boats sailing. We would like anyone who is planning to attend, to let us know in advance to help us in our planning. We will send them the final details when they are worked out. People can write to me at the above address or phone (416) 423-2522. Anyone from out of town who needs a place to unroll their sleeping bag, let us know that too and hopefully, we can arrange for them to stay with a local member.



Gone with the Wind

The following formed the basis of the STF Workup No. 2 1977 organised by Mike Briggs.

BLIND PILOTAGE IN CATAMRANS by Capt. James Briggs, RN.

1. Blind pilotage is the safe conduct of a vessel in bad visibility, say between 20 yards and half a mile. Such conditions are usually caused by FOG or MIST, often in the early morning, but can also occur as a result of heavy rain, snow or sleet, sand storms or smoke. Large vessels will use high definition radar and Decca, usually maintaining their planned tracks, albeit hopefully at a slower speed of advance; collision avoidance being the most important consideration. After all, there is nothing quite like a collision at sea to spoil your day.

2. Now, what can one do in relatively small sailing multihulls? One option is either to stay in harbour, or, if already at sea, keep well off shore and/or heave-to to await clearer weather. There are those of us who feel that this is being rather defeatist; indeed, there is much satisfaction, laced with some excitement, to be gained from a well conducted piece of blind pilotage. In "BLUEFIN" we have the following basic facilities:-

a. *Chart Table.* Big enough to lay out a full-sized large scale chart with instrument and chart stowages above clear of the working surface, all within easy speaking distance of the helmsman.

b. *Echo Sounder.* In sight of the helmsman and navigator. Readouts in feet, fathoms and metres. We also carry a lead line which can give the nature of the bottom with a blob of grease in the cavity underneath the lead.

c. *Log.* Again in sight of both with read-outs of speed and distance to 1/10th mile. Ours is a cheap and simple little "WASP", properly calibrated on a measured distance.

d. *D/F Set.* A small hand held "SEAFIX" is invaluable, especially now that more harbour approach radio beacons are appearing e.g. Brighton Marina, Chichester Bar. It also provides a hand bearing compass facility and covers the 1,500 M shipping forecasts, now on Radio 4.

e. *A Small hand-held Siren.* Used with a stop-watch against solid objects such as harbour walls, buildings, ship's sides or cliffs. It will give a range up to about a mile in calm weather. The formula is 9/10 blast to echo in seconds = distance off in cables (200 yards).

f. *A Kitchen Ringer.* Invaluable for ringing one minute before important happenings e.g. weather forecasts, alterations of course, a particular radio beacon transmission or that the pressure cooker has finished.

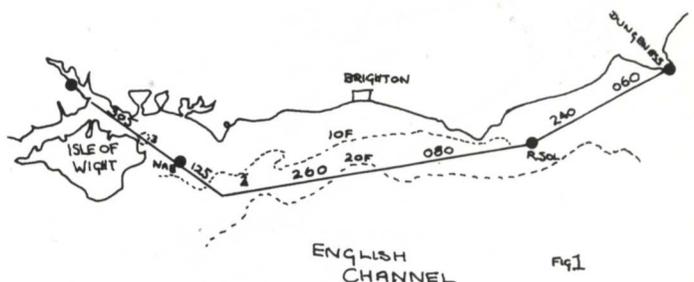
Now for techniques; the most important of which is teamwork between navigator and helmsman. Like building a boat it all starts with a sound plan; a plan that keeps you clear and to starboard of shipping routes whenever possible, a plan that makes best use of radio beacons to run dead ahead or right astern and a plan that makes good use of fathom lines on the chart, especially when needing to know exactly when to alter course onto the next leg of the passage. Planning should also include the best possible tidal information not forgetting to work out the height of tide for each hour of the passage, so essential for accurate fixing by soundings. Finally, the plan must be as well known to the helmsman as to the navigator if the former is to play his/her full part, knowing what to listen for and look for.

The first sign of bad visibility may be the sudden disappearance of lights ahead or a cotton-wool-like fogbank drifting over nearby landmarks. A final visual fix is all-important, even if you are enclosed in a familiar bay or harbour. Any prevision in "Keeping the reckoning" on your chart depends on knowing exactly where you were in the first place. Do not forget your log distance reading and the accurate time of this last compass fix.

The generating of a precise course and speed made good over the ground is the next stage. Six minute runs are usually suitable since this is 1/10th of an hour. Remember that 1 knot of tidal stream will move you 1 cable every six minutes. To improve accuracy it is often worth interpolating between each hour of predicted tidal movement.

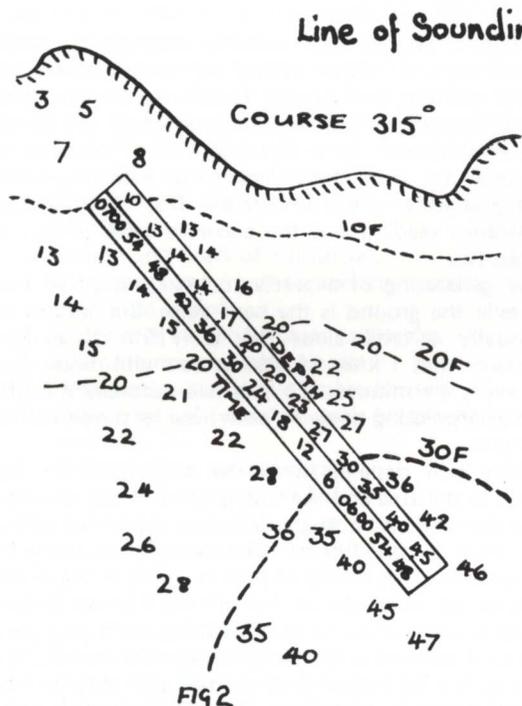
Fixing will depend upon the availability of radio beacons in the area and the topography of the sea-bed. It is rare to find radio beacons within 15 miles of each other, even in the English Channel so, assuming D/F bearings with an accuracy of plus or minus 5 degrees any fix, even at an angle of cut of 90 degrees between stations is never likely to be more accurate than a square of about 2 mile sides. Running fixes will be worse. However, this is a lot better than nothing and may well sort out ambiguities in soundings. Radio beacons can always be beamed in on to within visibility distance, or run astern until within range of the next one along the coast.

(Beware however, of reciprocal bearings.) For example, on passage from Dover to the Solent if one ran into fog south west of Dungeness one could run the radio beacon there astern bearing 060 degrees (T) until picking up of the Royal Sovereign beacon ahead, then home in until sighting the light float. After rounding it, it could be run astern bearing 080 degrees (T) until Nab bears 305 degrees (T) then home in on that ahead until the rusty old steep-to tower appears through the murk. Finally one would run it astern bearing 125 degrees (T) and the Fawley beacon ahead bearing 305 (T) into Southampton water. Throughout such a passage, depths corrected for height of tide will give a good indication of progress along track e.g. crossing the 20 fathom line south of Brighton, the 10 fathom line 6 miles short of the Nab and the 3 fathom line if over the Warner shoal. (Fig. 1)



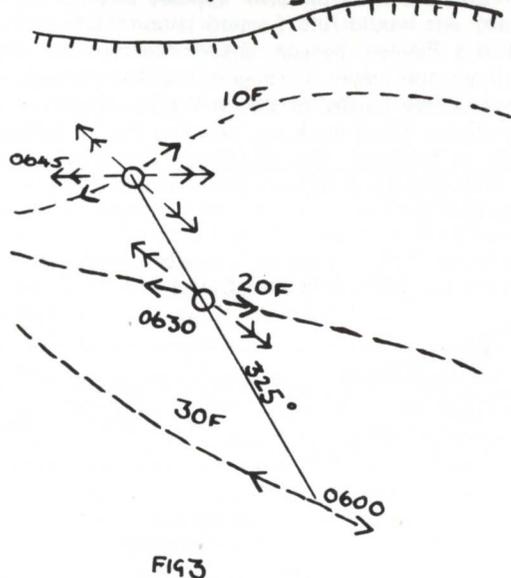


Soundings themselves can give good fixes providing the area is well and fairly recently charted. Gaps in fathom lines indicate incomplete surveys. There are basically two techniques: firstly the line of soundings (Fig. 2). A strip of tracing paper with a line inked in



upon it to represent estimated course made good is marked off in pencil every three or six minutes of run to chart scale and corrected depths written on it. This can then be aligned to your course made good on the chart and fitted to charted depths. The most recent depth will provide a fix. The second method is one of transferring fathom lines (Fig. 3) as they are crossed for estimated course and speed made good. Each

Transferring Fathom Lines



position line may be straight, curved or even circular, otherwise the technique is similar to a running fix on a single mark. This method is of little value where fathom lines are straight lines and parallel to each other, not often the case.

When close to shore or dangers it is important to know the minimum safe depth acceptable. This will depend upon the slope of the bottom and the time needed to stop, anchor or reverse course. It may be that a safety range from echoes of the siren will help. Amongst others we have used the buildings either side of Portsmouth harbour entrance, the Hayling Island yacht club-house building, and the sides of old warships moored in Fareham Creek.

While on the subject of sounds, the roar of aero engines overhead in airplanes can be helpful as can be the noise of trains, road traffic and even transistor radios on beaches.

Fog Signals are important and page 23 of the British Isles Volume of the Admiralty List of Lights is well worth reading. It explains the difference between diaphone, horn, siren, reed, gong and whistle amongst other things. We beat up the Little Russell Passage in the Channel Islands one pea-soup dark night arguing about which was which of the half dozen different sound signals blasting away and were lucky to chose the right horn on St. Peter Port's southern entrance arm. Had we then carried the light list in a certain South Coast TANE, page 124 would have told us that it gives a 2½ second blast every 15 seconds.

Now for the second, but more important half of blind pilotage; collision avoidance. The first advice we would offer is to re-read the appropriate Rule of the Road articles, 3C, 3K, 3L, 5 (note the word "hearing"), 6A, 10, 19, 20C, 33B, 35 and 36. The Seaway Code page 36 gives excellent detailed advice about radar reflectors (and insurance) while you're doing some winter reading. We have mentioned planning to keep well to starboard when near shipping lanes. Another splendid way to avoid collision in multihulls is to sail where other vessels can't float. This advice can be overdone but a few hours on a mud bank after you have used last year's tide tables is much better than the Q.E. 2's bows in your galley, even if she has only two out of three boilers alight that day. Hearing ships sirens all round you in fog is character-forming and needs some calm common sense. Firstly, station some-one with good hearing well clear of your own engine if in use, (and the line joining the helmsman and navigator).

Give him/her a hand-bearing compass for checking bearing movement. Remember, it's the bearings that don't change but just get louder that are worth taking special interest in. A ship steaming at 15 knots covers half a mile between siren blasts so listen very carefully for the sound of engines, forced draft fans, bow-waves and, oh yes, transistor radios. Keep your engine warmed up if not in use, cross shipping routes at a broad angle and remember to sound your "D" if sailing (or "T" if using engine) at intervals of between, say 2 minutes and 1½ minutes to avoid it being drowned by another vessel's siren in synchronism. Also, always burn navigation lights and keep a spot light ready in poor visibility. Finally, *never* assume that other vessel has either detected you on radar, seen you or, in these days of enclosed bridges, even heard you. On sighting him just act sensibly to avoid being hit by his bows, even if this means bumping down his side, chinese gybing or running into shoal water.

In summary, plan carefully, use every bit of information available, involve your whole crew and, last but not least, don't sail faster than you can pull up in a little less than the distance you can see or sound.



MAN OVERBOARD

by George Payne

Mike Briggs' article in the last SAILORMAN has made a most constructive contribution to the subject of safety which I hope will open up discussion among SAILORMAN readers lasting through several editions. When I first read the article I agreed with every point, because as Mike and I had exchanged numerous letters on the subject I was well aware of the drill he explains. Then I picked up Eric Hiscocks' latest book 'Come Aboard' in which he has the happy knack of introducing numerous interesting topics while describing his cruise to New Zealand almost incidentally. The significant remark he made about the use of danbuoys called for yet another letter to Mike.

While Eric and Susan Hiscock were testing their man overboard drill in a realistic manner, one would jump overboard and the other chucked a danbuoy soon afterwards, they found, however, that the combined windage of danbuoy, lifebuoy and rope set the gear drifting off downwind faster than they could swim after it. Reading this made me think that we should reconsider our ideas on safety procedures yet again. First of all though, I recommend, and Mike Briggs agrees, that a drogue be attached to the lifebuoy if used as described in his article.

After their experiments the Hiscocks gave up the use of danbuoys, but I do not think that we should necessarily follow their example. They pin their faith on high, strong guardrails so that neither of them is likely to fall overboard in any circumstances. This is a sound principle, but we cannot follow it slavishly on a polycat because the cost, weight and windage of guardrails around the two hulls is prohibitive. My alternative is to have a safe area on Raka's deck with a perimeter formed by a staffrail across the aft end of the deck, a centre pulpit at the bow, and ropes from this via the shrouds to the cabin tops. Down the centre of the deck is fixed a heavy sail track with a slide to which the safety line from the personal harness can be attached. Crew can move freely to any part of the safety area on their line but must go on their knees to reach just outside the perimeter. Arrangements on deck such as these should be the starting point of all safety precautions.

If, despite these precautions, someone falls overboard a simple danbuoy with brogue attached should be thrown overboard immediately, simply to mark the leeward limit of the search area. The first lifebuoy with long floating line attached should be held back until we have gone about and returned to find the victim when it should be dropped to windward of him as we sail slowly past. We now have a little more time to plan the actual pick-up because if rushed we might run down our casualty. Our second lifebuoy is still held in reserve in case our first cast was unsuccessful. Someone before now should have littered the sea with garbage as extra markers — we always keep a bag of litter in our steering well as first suggested to me by Ruth Wharram.

I accept the criticism that I have not fully tested this procedure, but it is based on experience gained in rescuing our Portapotti which unexpectedly separated from its handle when the contents were being emptied overboard. Camping saucepans with detachable handles also give good practice!

If you disagree with me please make your views known to all readers through the pages of the SAILORMAN. Only in this way will we be able to work out a drill which can be thoroughly recommended. To deal with emergencies requires thinking the unthinkable. It is a human trait to get a warm glow of satisfaction from some armchair idea untested in harsh conditions and then return to more pleasant thoughts of sailing in the sunshine. I hope I am not guilty of this but your response should soon tell me.

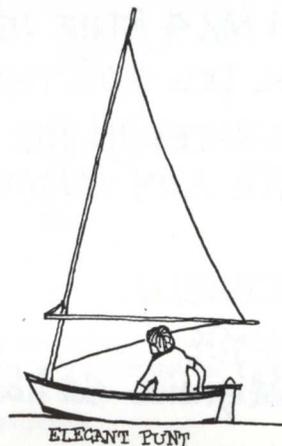
DINGHYS

By Roly Huebsch
(See Toronto Sail-In)

A coupe of eight foot sailing dinghys work wonders with the children at a sail-in, provided of course that you have a safe beach. Just let them alone to learn for themselves and they have a ball. Soon you will find small children whose sail training on the family boat has been "keep out of daddy's way and keep quiet" commanding their own little craft and finding out for themselves what sails do.

If anyone is looking for an eight foot pram that is very fast to build, is light and has good carrying capacity for its size I can recommend the 'Elegant Punt'. A number have been built around here. She is designed by one of America's most innovative marine architects Philip Bolger. His designs range from fishing craft and pilot boats through classical gaff cutters to an ocean crossing row boat and a plywood trireme! His line of small plywood boats for home construction is marketed by Harold Payson of Pleasant Beach Road, South Thomaston, Maine, U.S.A. 04858. \$3.00 U.S. will bring you a brochure. The 'Instant Boats' range from the 8' Elegant Punt to a 32' folding gaff schooner that will fit on an ordinary small boat trailer. They require no lofting or building jog, offsets are given to cut the sides directly out of plys, these are attached to a midship frame and the ends are drawn in to a transom or stem or stern post, depending on the design. Then the sheer and chine stringers are attached on the *outside* and finally the bottom is fastened on.

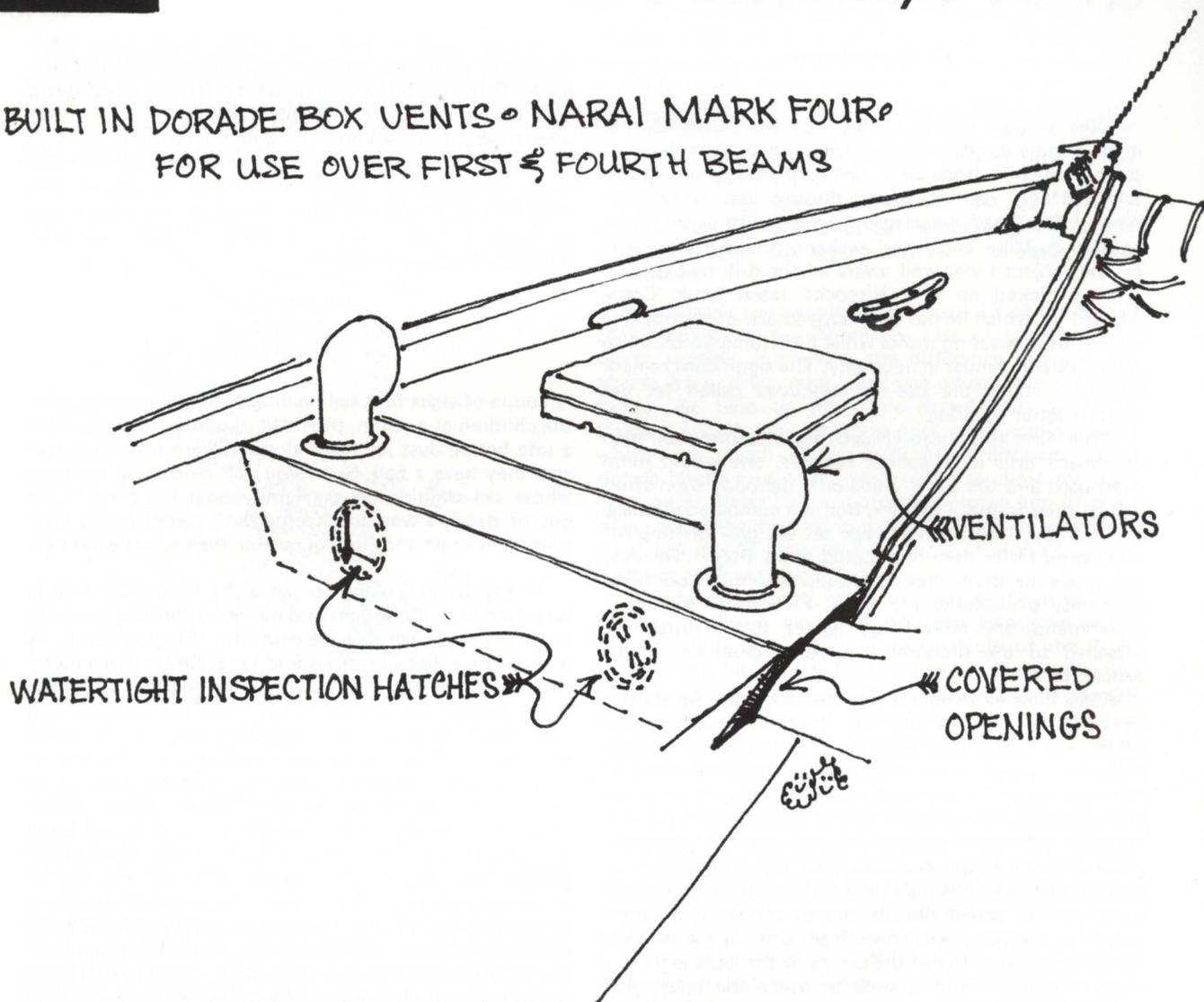
Compared to an Optimist Internationa 8' pram, the Elegant Punt is much easier to build, is lighter, has more carrying capacity, rows better and, with her lively sheer, looks better. My own dinghy has carried two adults and three children in the 8 to 12 range and still had reserve freeboard. The optional sailing rig has a leeboard and a rather alarming 16' mast carrying 59 square feet of sail.





The Boatyard

◦ BUILT IN DORADE BOX VENTS ◦ NARAI MARK FOUR
FOR USE OVER FIRST & FOURTH BEAMS



DEAR POLYNESIAN CATAMARAN ASSOCIATION,

ENCLOSED IS A DRAWING OF AN IDEA WE INTEND TO USE ON OUR NARAI MK4 ◦ THE VENTILATORS WOULD BE REMOVEABLE WITH SOLID DECK PCS. FOR THOSE TIMES AS REQUIRED ◦ SCREENS COULD BE INCORPORATED IN THE INSPECTION HATCH OPENINGS ◦ WE WOULD APPRECIATE ANY COMMENTS OR RECOMMENDATIONS.

SINCERELY

David & Neila

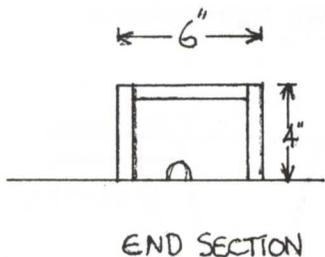
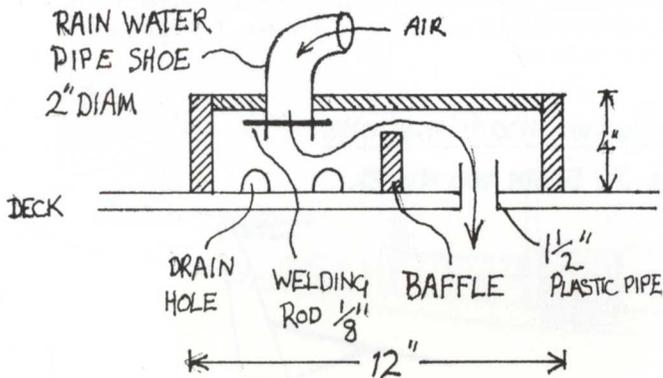
35 liberty st. toronto ont. canada m6k 1a6



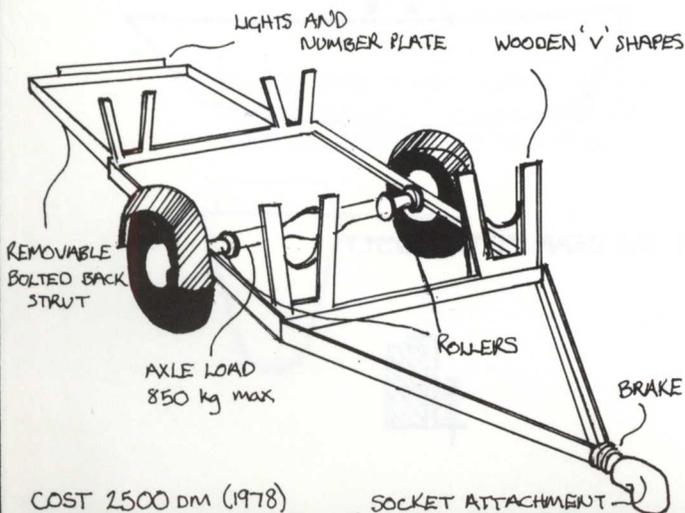
Dorado-type ventilation by Les Landricombe

When I finished the keel, stems and sterns of my Narai mk. IV, I had a lot of offcuts. Out of these, I made my ventilators which are very effective. I went to a DIY shop and purchased 4 rainwater shoes at 60p each, and a short end of 1½" plastic pipe which they gave me.

The construction of the box is simple. It consists of two ends and two sides neatly joined. Before you fix the top on, cut a hole with a coping saw in the wood, so the rainwater shoe makes a neat fit when pushed through the hole. Before fitting the box to the deck, cut a hole in the deck so that the 1½" plastic pipe is a tight fit when fitted. It should be kept flush on the under side of the deck, but should stick up at least an inch or more above the deck inside the box. A baffle is required in the box to stop water getting below. The rainwater pipe can be turned to face the wind as required.



Trevor Clarkson trails his Hinemoa to the Mediterranean. He says that the length of the trailer should not exceed 8 metres when towed through Belgium. In Yugoslavia and Italy this length is 6m with a one axle trailer, but Trevor says that they had no trouble with their 8m trailer.



To get the hulls onto the trailer, three people are needed, or maybe two musclemen. The back strut is removed and each hull at a time is pushed on a bogey to the rollers and then pushed onto the trailer. The hulls are bolted together with short beams. To launch, the trailer is put in the water and tipped so that the hulls float off. Dismantle the trailing beams and bolt on sailing crossbeams with the boat in the water. Trevor says launching is feasible with two people.

The Hinemoa cost Trevor 6000 DM which is about £1,500.

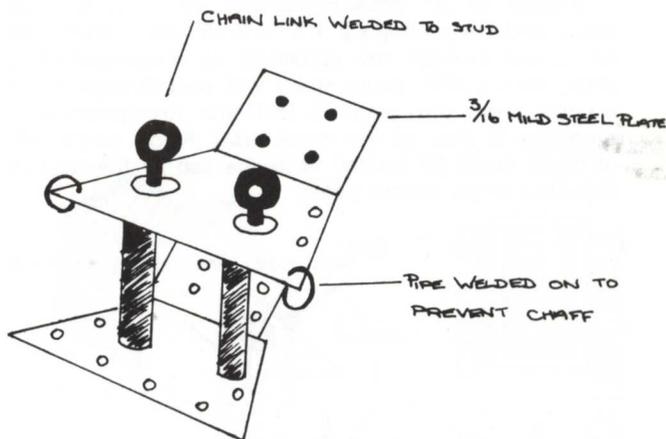
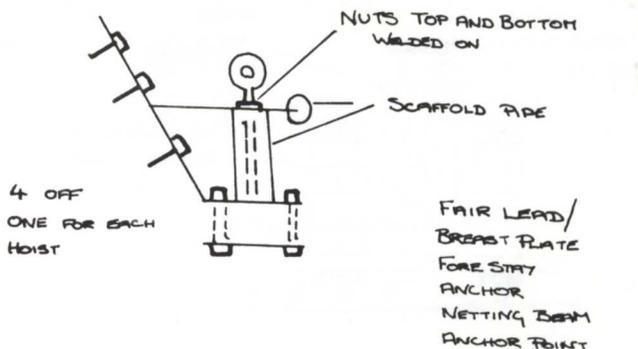
Pete Jezard writes about his Oro's fittings

The boat is 50' LOA 24' Beam.

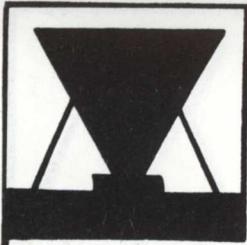
The main beams being laminated from 25' scarfed lengths of 5" x 2" (it seemed a shame to cut them back to design length) during beam construction I induced a stressed curve for greater strength.

Beams 1 and 4 are solid and sheathed with 3/8" ply. Cross section Beams 1 and 4 are 8" x 5" including ply. 2 and 3 are 10" x 5" unsheathed.

As we are moored alongside a ship-breaker's yard I have managed to get the following steelwork fabricated.



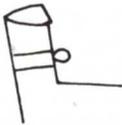
After seeing the damage to Vic Felgate's Tane stem-post, which split at the forestay bolt after an argument with a harbour wall an alternative to the above would be wrap round chainplates.



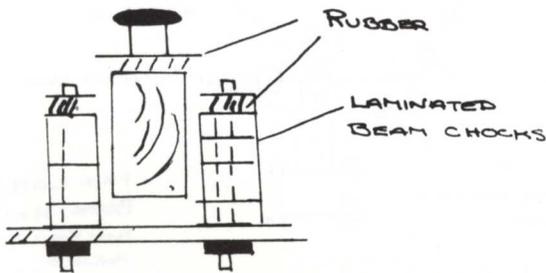
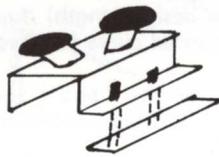
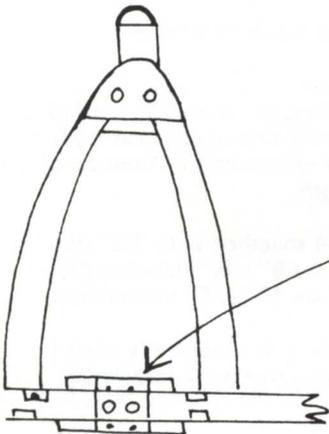
KALIMERA

Konrad Kampas wrote to say that he had launched Narai no. 89 on the 28.7.78, at Grado in Italy. She was then sailed down to Greece and is now moored near Athens. Konrad calls the cat a "Naro" rather than a Narai because the proportions have all been extended by 10%. The cat is now 13.5 m long and 6.45 m wide. Sail area is 114 m² including mizzen and topsail. The hulls have been constructed foam sandwich, which helps to improve the styling. The engine is an Opel diesel with hydraulic transmission on two propellers which allows maximum manoeuvrability by reversing the oil stream in one of them.

THIS WELDED
AFTER FITTING
TO STEW/STERN POST

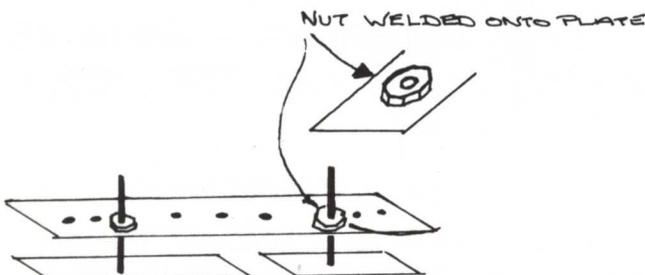


I've had these bollards made to fit over the centre of each beam chock on beams 1 and 4 these are bedded down onto 1" rubber and bolted through chocks with 5/8" stud.



A slight modification to the beam mountings.

Instead of 3" square washers  welded to beam stud I'm putting a 2' x 5" x 3/16" plate which will be bolted through the gunwale to a corresponding plate, then a 5/8" beam study will pass through a nut welded onto this plate. I feel this strengthening is necessary in view of the extra beam. Also a single link of chain could be welded onto the top of the stud to provide a secure anchor point.



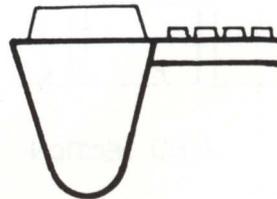
KALIMERA has been through a severe gale force 9 in the bay of Patras where she travelled at a fascinating 12 knots under bare poles! Konrad says that KALIMERA gives a very comfortable ride in the choppy waters of the Mediterranean. The cat took 2 years, 1 month and 2 days to build.

Some modifications

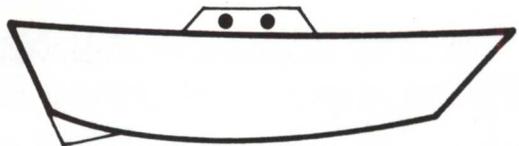
1. JW STERN AND RUDDER



2. BEAMS AND SLATTED DECK

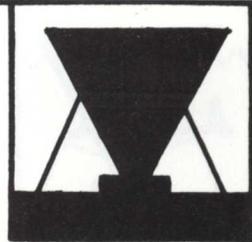


3. JW CABINS



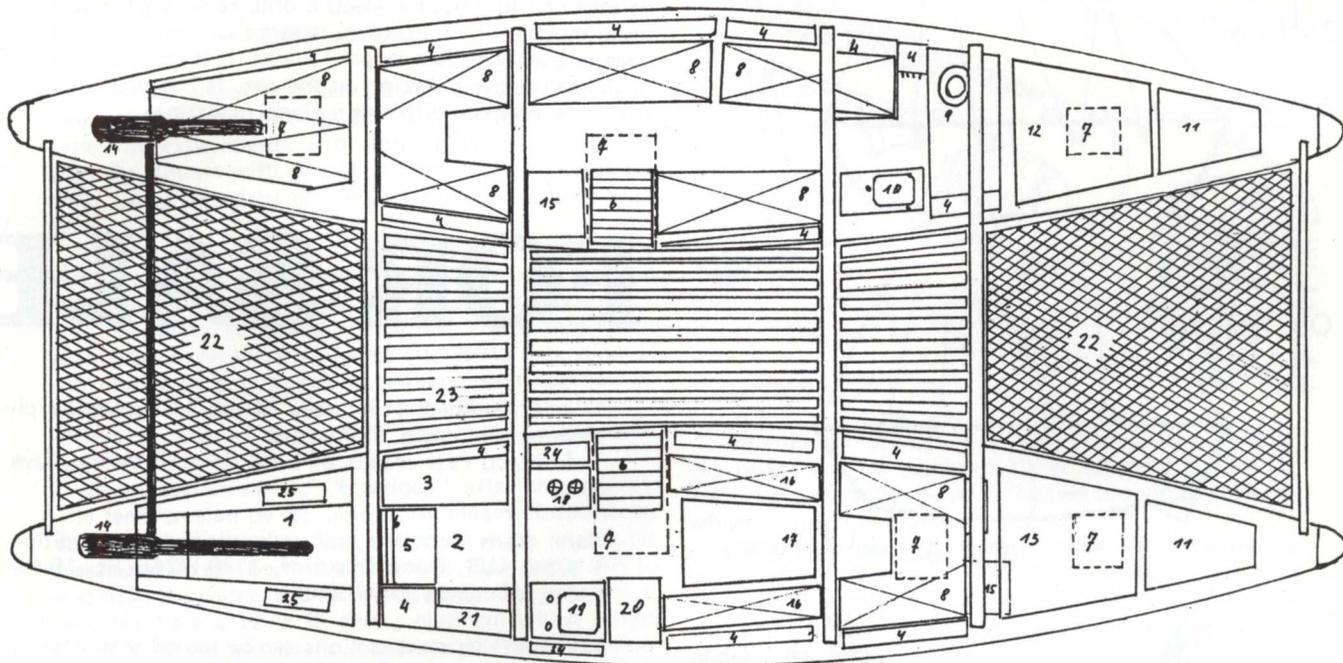
4. JW BEAM FITTINGS





Hochsee-Katamaran "Kalimera"

Layout Plan

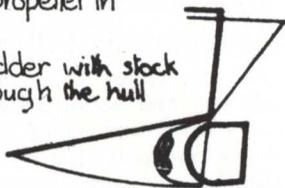


- | | | | | |
|-------------------|-----------------------------------|------------------|------------------------------|---------------------|
| 1. cockpit | 6. steps | 11. anchors | 16. seats with storage below | 21. chart storage |
| 2. chart room | 7. hatchway | 12. storage | 17. table | 22. netting |
| 3. chart table | 8. berths with storage underneath | 13. sail storage | 18. cooker | 23. slatted decks |
| 4. shelves | 9. toilet | 14. tillers | 19. sink | 24. utensil storage |
| 5. engine housing | 10. wash basin | 15. wardrobe | 20. refrigerator | 25. locker. |

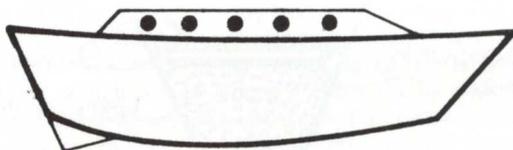
Our boat, Kalimera

Opening for propeller in long skeg.

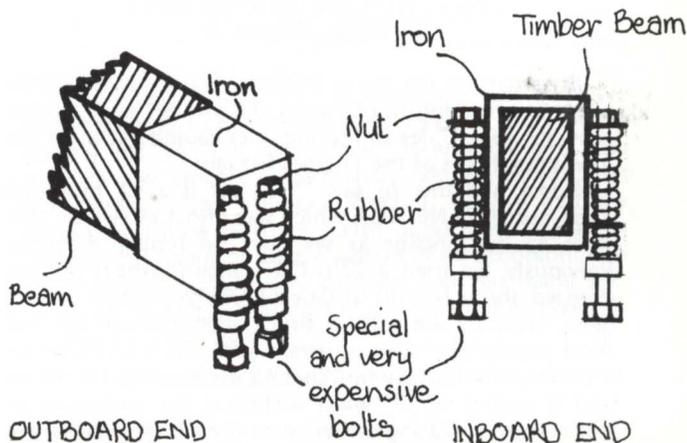
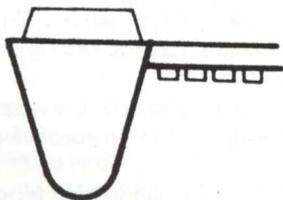
Balanced rudder with stock passing through the hull

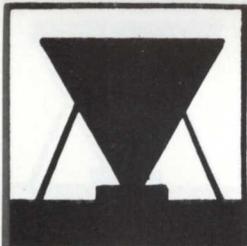


Longer cabin tops



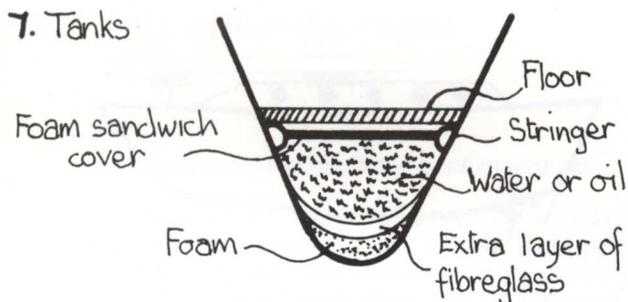
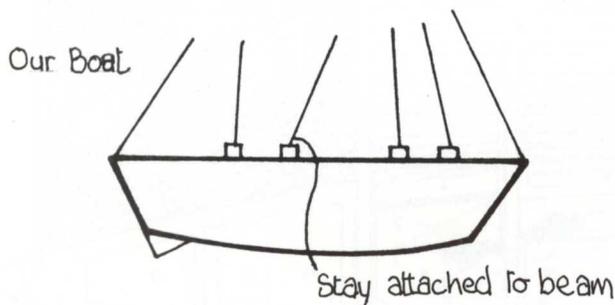
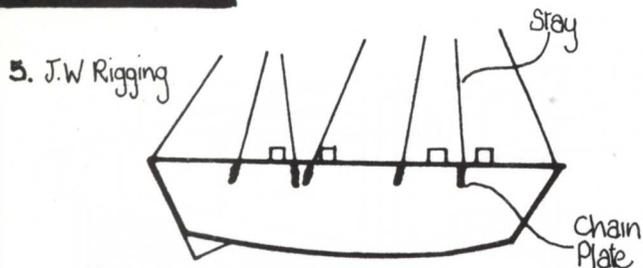
Beams are placed higher to give larger opening through bulkheads slats underneath crossbeams





THE FLAP WHEEL
from Garryson Abrasives Ltd.,
Spring Road, Ibstock, Leicestershire

One of our members makes something called a Flap Wheel. It is a non-clogging long lasting abrasive. It can be attached to a normal electric drill, removing the drill piece though. The flap wheel replaces sanding discs, and does not leave gauges or swirl marks. It is ideal for use on boats, in the home or on the car. It has had good write-ups in several different national magazines.



TANE ROA and the winter afloat
by Eddie Johnson Jr.

Sheerness on the Isle of Sheppey, Kent, suffered from winter storms and floods again this winter, as it did the previous year. Gales and spring tides caused havoc on the low lying shores of the Thames Estuary.

Eddie had this to say: "Out cat is a 30' modified Tane called TANE ROA which was afloat all winter. She rides to her anchor as we have no proper mooring. Previously we used a 25lb CQR anchor which the cat dragged through mud at Queenborough harbour during gales. Now we use a 10kg. Bruce anchor which we find most satisfactory even in severe gales. As our cat lies on a drying mud flat, we find that 12 metres of 5/16" chain and 4 metres of 2" warp sufficient for anchoring in home waters. During the worst of the winter weather we also put out a 65 lb. Danforth anchor as well.

FOR SALE

1 pair modified Tane hulls 30 ft. LOA. Marine ply sheathed. No decks. £700 o.n.o.

Contact: Pete Jezard, 34 Lime Road, Teesville, Cleveland.

Narai plans, complete, rolled, unused, good condition. \$ 175.0 U.S. Denis Diekhoff, 1100 W24th St., Minneapolis, Minnesota, USA 55405.

22ft and 13ft mast sections can be joined with wooden plug and used for Pahi 31 Tangaroa or Narai mizzen mast. Size approx. 6.5" x 5" by Kemp masts to B and R design (as used by IOR fleet 2-3 years ago). Unanodised sections only. £175 o.n.o. Richard Wood, Denysholme, Chilworth Old Village, Southampton, Hants.

FOR SALE

51 ft Tehini	Lying Sittingbourne	£19,500
46 ft Oro	Lying Bembridge	£7,500
34 ft Tangaroa	Lying Poole	£7,500
34 ft Tangaroa	Lying Crosshaven	£5,000
27ft 6in Tane	Lying Gosport	£2,000
27ft 6in Tane	Lying Fareham	£2,200
22ft Hina	Lying dismantled Dorking	Offers

Hina sales. Sprit rigged

Echo sounder.

Wire for large boats - galvanised.

Narai: Working jib.

Narai: Sprit. Main & sprit.

NOTE:

1. Please advise the register when you have made a purchase so that the records can be amended accordingly. Act now!
2. Please enclose several copies of the description of what you want to sell, so that prospective purchasers can be advised.
3. Please enclose a SAE when writing for details of goods for sale.

For the above goodies, contact Bob Evans, 25 Hazelbank, Hazelbeach, Llandstadwell, Milford Haven, Dyfed. Tel: 0646 - 600278.

DOLPHIN GAMES

by Wade Doak

For two years now we (Jan and Wade Doak and helpers) have been using a 36' "Raka" catamaran for a series of experiments with wild dolphins establishing friendly contact with groups of them and learning about their social behaviour at the same time as we show them ours.

We are keen to explain our methods of approaching dolphins to other Wharram cat owners who may be interested in playing with dolphins in similar ways.

The sailing catamaran is perfect for man/dolphin interactions and it would be an interesting extension of our experiments if people in similar vessels approached dolphins in similar playful and creative ways in different parts of the world, and then pooled their experiences.

Our vessel is named "Interlock" after the project. The term created by Dr. John Lilly means "interspecies communication". We have fitted it with a double hammock in the bows which makes for easy access to and from the water, and facilitates contact with dolphins. We also have a 12' x 8' diving platform which hinges down from the rear beam — necessary for scuba diving, film work etc. but not essential for dolphin games if you have the hammocks.

Our craft has twin 9" speakers in each bow compartment which beam stereo sounds out through the hull.

It is difficult to say which ingredients in our set-up are essential, but we have had many successful, prolonged interlocks. Most people find that while dolphins bow ride they leave if you get in with them. This may be fear.

On our bows we have four 20" rondels symbolising man/dolphin communication or interlock. We have this same symbol on 'T' shirts. On our main sail there is a pair of leaping dolphins.

We feel it is vital that we avoid any tendency towards manipulating dolphins to our own ends. We must not harass them, encircle or in anyway force our presence on them. Even using a camera should be done with discretion — it forces you to behave in an active, manipulative mode and can spoil the spontaneity of interlock. A receptive mood is best for all on board.

When we sight dolphins now we just hove to or beat quietly about in their vicinity.

From our forward beam hangs a bell which we ring about six times when they surface for air.

If they are not too busy herding fish, they will leap out and head over to us. We play carefully chosen music through our bows, especially flute and wind instruments. This tunes us into their presence.

When they come on our bows we play a special "message tape" which would take a lot of space to explain but only seconds to demonstrate. The tape is an analogue statement about the low frequency sound channels we and the great whales use and the high frequencies used by dolphins.

Meanwhile we are on the bows and in the nets enjoying being with them. Mutual trust can be established as long as we place ourselves within access of the dolphins — so that each species is equally vulnerable to the other.



Sometimes musicians with flute or trumpet play from the bows: this has produced much apparent interest. If we hove to silently dolphins huddle around motionless while the music is playing.

It seems wrong to us to try to touch the dolphins — a sudden lunge may succeed but that is really rape and startles the creatures. The interlock approach is to hold out your hand — show them a human limb — its joints and expressiveness. On such occasions dolphins have actually approached us and initiated gentle contact with a hand or a dangling foot.

By the time interlock is firmly established at the bow, you can prepare to get in with them. Remember that man is inherently boring to these ocean nomads — many of the things we do are to heighten interest in us — the message tape, the rondels and the dolphin suit we wear may not be essential but our system works.

When you enter the water it is important to avoid swimming straight at them. Treat them like villagers on a strange island. With snorkeling gear start diving down, *always* doing the dolphin swim or kick. They start to mimic us, and seemingly lampoon our attempts to mimic them!

This is the beginning of body language communication, just as between mother and child or people from alien cultures. It has led to a whole range of amazing behaviours which space doesn't allow us to describe here. Sufficient to say that we have had dolphins stay with us for up to four hours twenty minutes and in each case it has been our side that had to break it off from sheer exhaustion.

From these gameplay sessions we are learning constantly and we keep modifying our approach flexibly in the light of new findings. We have learnt to identify individuals from the fin patterns and now know when we are meeting old friends.

If anybody would like to share our approach we would be glad to hear from them, to place them on the mailing list for our "Interlock" Newsletter and help them in any aspects of gameplay. We are careful that our rondel, the interlock symbol, is only used by people who have registered with us so that it does not fall into the hands of people who might treat dolphins in an arrogant, manipulative manner. Jan has made silk-screened 'T' shirts bearing the rondel symbol available to registered interlockers.

Our headquarters is Box 20, Whangarei, New Zealand.

Cruising Symposium

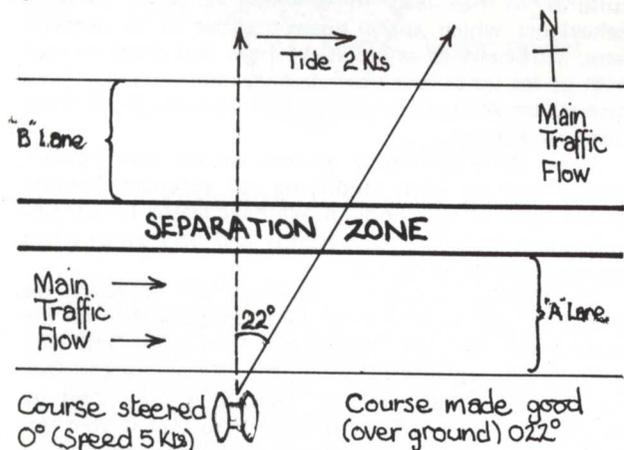
Report of the Royal Yachting Association's
CRUISING SYMPOSIUM 27th January, 1979

By Robin Fautley

The meeting was held at the Little Ship Club in London, and covered two morning sessions on 'The Law and the Cruising Yachtsman' and 'Traffic Separation Schemes and Crowded Sea Areas'. The afternoon sessions were split into three discussion Groups, A. First Time Foreign, B. Extended Cruising and C. Cruising On Continental Inland Waterways.

The first session on the 'Law' provided one or two surprising tit-bits. As the main speaker, Gordon Fairley raised the following points which had not been realised by most yachtsmen attending - 1. To take an UN-REGISTERED yacht outside U.K. waters was illegal. The R.Y.A. have reached agreement with the 'powers that be', that no action would be taken by U.K. Authorities but advised that all cruising yachtsmen, if their vessel is unregistered, should obtain the International Certificate for Pleasure Navigation (from the R.Y.A., issued free to R.Y.A. members or for a fee of about £3 if not a member) together with the Helmsman's (Overseas) Certificate of Competence. Full details available on application to R.Y.A., Victoria Way, Woking, Surrey. 2. The flares now carried by many small yachts require a firearms certificate if they are the Dial a Star or very Pistol type, and are taken ashore. However, if they are kept on board under security, a certificate is not required. A firearms certificate is obtainable free if it is for such pyrotechnics as form part of a ships distress equipment. There were mentions about the increase in liability for damage claims, Salvage and Towage (a standard form based on the Lloyds recommendations has been issued by the RYA and is useful to have aboard just in case of dire need!)

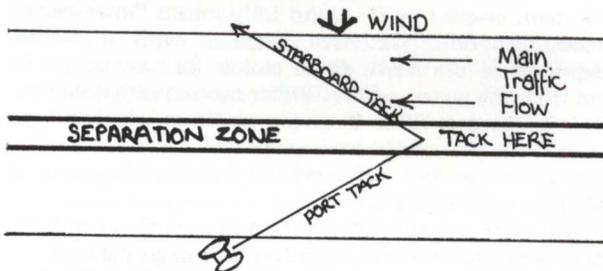
The second session allowed Capt. R. Emden R.N. the chance to give the views of those policing the traffic separation schemes to yachtsmen. The main rules are that if you have to cross a shipping lane, you must do so by steering at right-angles to the lanes so as to be out of the lanes as soon as possible. An illustration of this is given:



Capt. Emden then said that on the radar screen, the boat would appear to have a component of course made good *against* the main traffic flow in "B" lane and would be picked up as a 'rogue vessel' and course plotted. A check on the speed of the vessel and calculations of the East setting tide would then reveal that the course steered was at 90° to the main traffic flow and the boat

would no longer be classified as a 'rogue' - no further action. You are expected to cross at a minimum speed of 2½ knots and if the winds are so light or adverse that speed cannot be made good - *use the engine, or avoid the lanes*. If it is necessary to tack across the lanes, do so with the traffic flow and not against. When you find yourself on a collision course with a vessel in the main flow, make your intentions clear, early and be ready for the unexpected. The vessel you are on collision course with may have to make a manoeuvre to avoid another boat that you were not aware of or cannot even see! It was also suggested by Des Sleightholme that rather than alter course to avoid a collision, consider slowing down. If in doubt, do both! (Ed.)

Remember, if the compass bearing of a ship remains steady, you are on a collision course!



The afternoon session more likely to be popular with Polynesian Catamariners was on EXTENDED CRUISING. P.F. Carter-Ruck, who is the Commodore of the Ocean Cruising Club led the discussion. He had been on a long voyage of Iceland, owns and sails boats with the names Fair Judgement 1, 11, 111 etc. and appeared to be more of a racing man than a long-distance cruising person. The audience was asked what size boat would generally make the best craft for extended cruising. The general opinion was about 30' long keeled traditional for 2 persons and upwards of 10' per additional crew member. Multihulls were not mentioned so there must be a doubt about the amount of common sense in the audience!

Some of the tips useful for Polycat sailors were:- Self-Steering devices considered essential (Do remember at all times to keep a LOOKOUT and be very alert if near a coast for changes of wind direction if using Vane type gear. Bernard Moitessier lost his boat by sleeping through a wind direction change.)

Charts bought locally are often more detailed and up to date.

Wind charts for the oceans are essential for long distance passage planning. (E.g. Do not plan to sail in the 'stormy' season of the cruising area.)

Stores. Have a standard inventory of food (especially tinned or dried food). As the food is consumed tick it off the inventory and at the end of the trip, a summary can be made of the items required for replenishment and sent to a local provisioner ready for the return to the boat the following weekend.

Tidal differences - are valuable for all small harbours in the cruising area, just in case an unexpected entry has to be made. Knowledge of what the tide is doing, especially in fog, is essential for small ports. (Admiralty tide tables are by far the most detailed and precise for this purpose. Ed.)

Medical — There were many different views as to the reading matter to take. If on a long trip, consult your doctor before leaving and obtain a recommended list of drugs. Officially, the medical officer of the port from which you are leaving should arrange the supply of 'prescription' type drugs. Do not take morphine but a substitute drug is now available which does not have some of the harmful effects of Morphine.

Crews — The captain of a vessel, including a small yacht, can be held responsible for the actions of his crew. e.g The skipper may have to pay the airfare home if a crew-member has to be discharged. There have also been a number of instances where the casual crews picked up in some areas have taken over the yacht and pushed the owners overboard and sailed off with the boat, the owners never being seen again.

Comfort — It was considered essential that basic comforts are maintained including dog-houses or perspex domes. the latter being prone to misting up can be kept clear by wiping over a cut potato on the surfaces affected.

Reporting — So that those at home do not worry unnecessarily about one's situation, there was a report-

ing procedure available through the auspices of Lloyds. If no radio was taken on a long ocean voyage it was considered a great comfort that when a ship was sighted and was able to read ones signal (ZD 2), those at home could check up, from time to time, with Lloyds on the position of the yacht.

In summary: The R.Y.A. do run a number of similar events and the exchange of views against yachtsmen on the actual practice, as opposed to theory, of cruising at these meetings is of value. The main impression that I had from the Symposium is that through the Sailorman, P.C.A. members must have better practical information for their circumstances than most other groups of yachtsmen in the world.



TRANSPORTING & LAUNCHING AN ORO

by Pete Jezard

Jackie and I were starting to worry about moving the boat, as the cheapest quote we received after shopping around the professional contractors, came to £350. Just as our hopes for getting launched were sinking almost as low as our finances, we met Ernie, a top class welder. Now we have met people before who have offered to do a specialised job for us and then had to wait for months in vain. But Ernie was as good as his word and within a week he built us a sturdy, four wheel trailer, capable of handling anything from a Tane to a Tehini.

As my holiday was due to start on August 19th we needed to launch on the 20th to make full use of the shore-time. Unfortunately this date coincided with the high spring tides, which was to give us some interesting problems on the day.

Being ultra safety conscious, I made stage by stage plans, writing it all down with diagrams, then along with the four friends who were to help, we went over the procedure and the terrain several times until we were all satisfied with the arrangements.

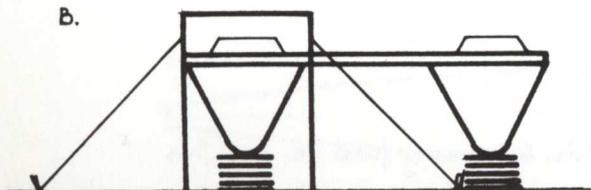
Work started at 5.00 a.m. Saturday morning erecting a scaffold frame to bridge the port hull at the building site. I then jacked and chocked the whole boat up an inch at a time using one three ton jack until there was a clear two feet under each hull.

Sunday 5.00 a.m. The specially made trailer was then eased under the starboard hull which was then jacked down to sit firmly on the trailer. The port hull was supported by its chocks underneath and two slings hung from the scaffold bridge. The beams were then removed, leaving the starboard hull ready for the road.

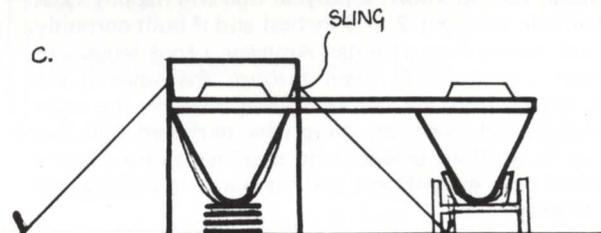
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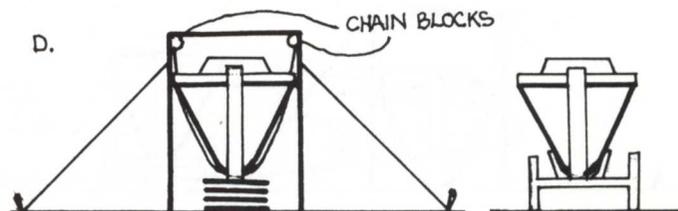
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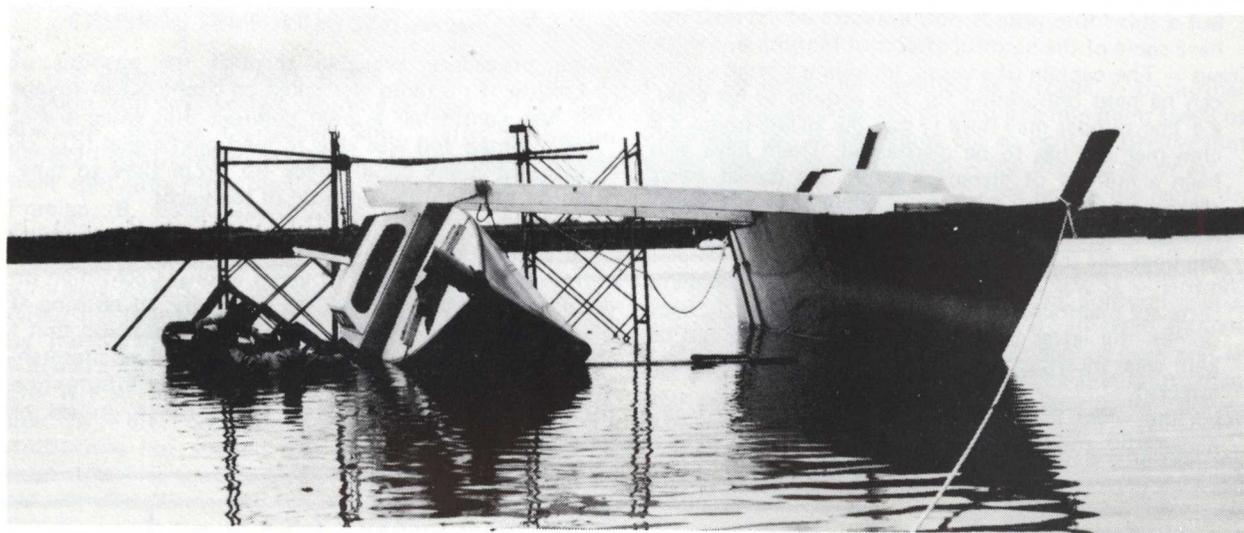


C.



D.





We then took the starboard hull to the river and placed it in another scaffold bridge below the high water mark. Back at the building site we suspended the port hull in its sling and with the aid of chain blocks, slid the trailer under. Unfortunately this operation took longer than expected, with the result that when we arrived back at the river, the tide was already lapping around the chocks supporting the first hull. It was in fact a full forty feet away from the water's edge. The moment for decision – if we left it there was every chance that the hull would float, scaffold and all, to be caught in the wash of a passing high speed tug with disastrous consequences. I decided to press on.

We aim the second hull with the aid of the towing landrover and pushed it, still lashed to the trailer, alongside the first hull. Beams 1 and 3 were quickly positioned across both hulls and just as we were about to shove the bolts through the starboard side the wooden chocks under the keel merrily floated free leaving the hull to gracefully roll in her sling onto her side.

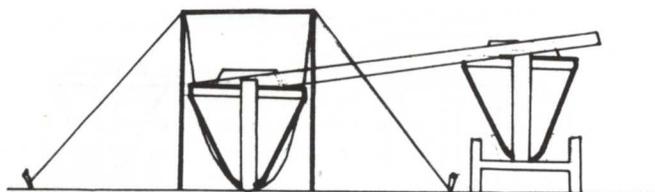
Useful fact to know, a polycat hull will happily float on her side (draught 2 or 3 inches) and if built correctly will not take a drop of water. Anyway, I took lengths of 1" rope and threaded them through the holes in the main beams into the corresponding holes in the main bulkheads, tightened the sling (the starboard hull was still in its scaffold bridge), said goodbye to the helpers who had been magnificent and sat down to wait for the tide to drop.

All I had to do then was to unlash the port hull from the trailer and with the ropes running through the beams/bulkheads, make a spanish windlass. Then as the tide rose the ropes were tightened, then replaced with bolts.

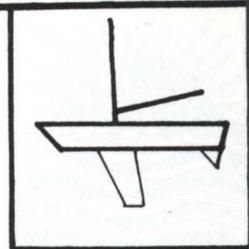
In the early dawn light of the Monday morning Jackie and I floated the 'Nameless One' by her mooring ropes away from the scaffold and trailer to her permanent mooring. We were exhausted having had just six hours sleep since the previous Friday. Perhaps it was tiredness, but in the half light, afloat after the three years of joy and pain in her building, I could only stand in silence at the port bow and pour a trickle of Newcastle Brown Ale over the stem post.

About the scaffolding we used, the easy-erect frames which were supplied by S.G.B. Ltd. who were extremely helpful and very reasonable. The bridge at the river took about 10 minutes to erect. Cost about £5 for the week, delivery and collection extra. In the end we paid £13 for its transport and they waived the hire fee. As they often do for clubs and associations.

The Landrover plus Allen driver/owner cost £5.00 per hour (Sunday). He is a man of considerable experience and integrity who comes highly recommended.



Low tide that evening found the boat thus



Centre-Board for a Narai

by Dolf Kruger

Dolf Kruger has a Narai NACKEN on which he uses a centreboard of his own design. He reckons that his course made good to windward is 5–10° better with the board.

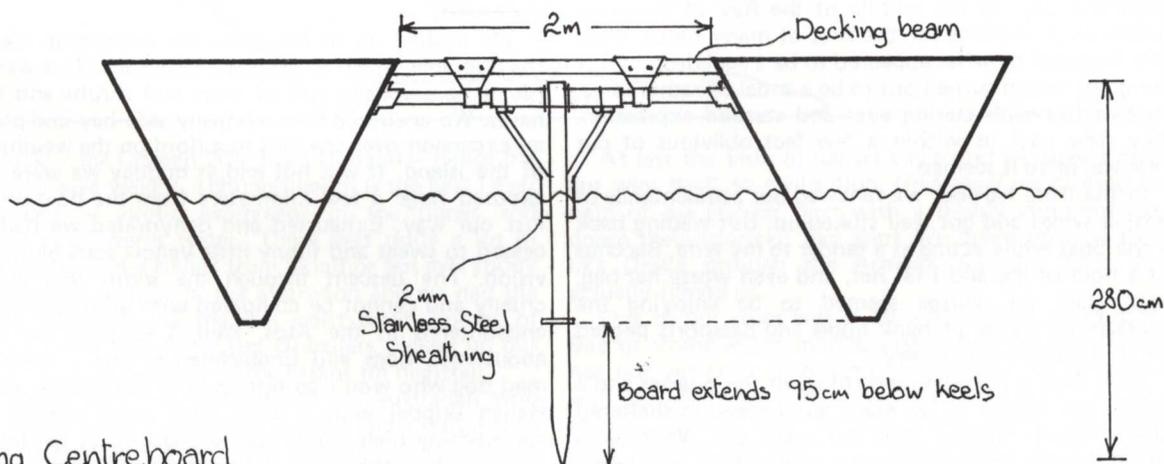
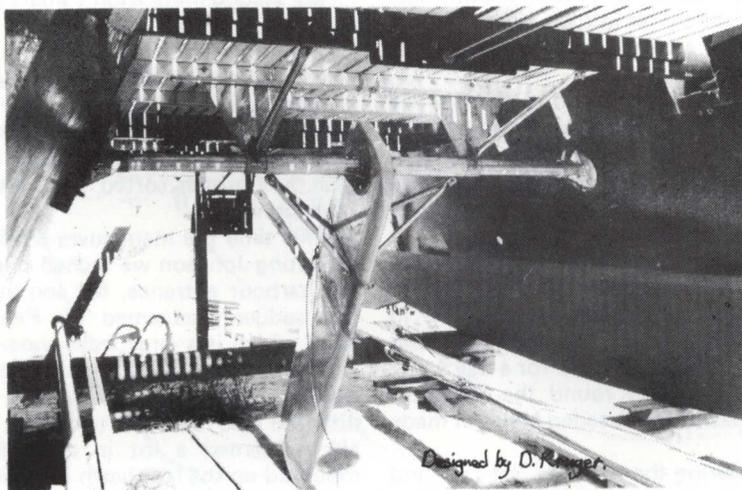
Board position. The CB is set between the hulls and pivots on a pipe situated 60 cm. (about 2') aft of bulkhead no. 2.

Material. The CB is 280 cm. long (about 9½'), 68 cm. wide and 65 mm. thick. It is made of five layers of 12 mm. plywood. The glue accounts for the rest.

Construction. The width between the hull is 2m., 80 cm. wider than normal. The CB pivots on a pipe about

3" in diameter that runs between the hulls where it is bolted on. The pipe is sleeved by a thicker pipe onto which the CB is attached by means of flanges about 30 cm. in diameter. Hanging down from the deck beam are two metal triangles which also sleeve the 3" pipe. They add strength and prevent the CB structure from sliding from side to side. 1½" diameter pipes brace the lower part of the CB at the water line, where there is also a stainless steel sheath for strength. The CB extends about 95 cm. below the keels of the cat.

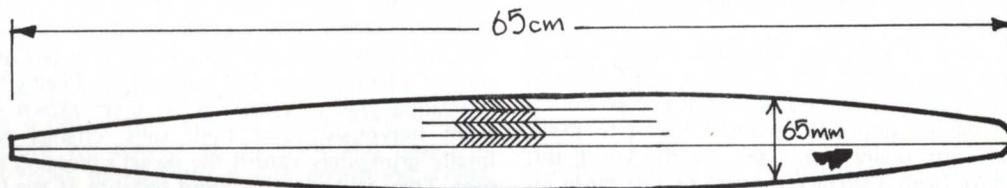
As the CB is made of plywood, it floats and so has to be held down. An alternative would be to put a piece of lead at the lower end of the plate.



Pivoting Centreboard

Designed by: Dolf Kruger

5 Layers
12mm Plywood 60mm ± 1mm
65mm Glue lines





Over which horizon did you sail?

Hinemoa's, to use the hip vernacular, "are where it's at 'cause they are out there doing it!" Here are two more tales of these remarkable 23 foot catamarans (well I think they are because I sail one! Ed.)

Trevor Clarkson is a British subject working in West Germany. He trailed his Hinemoa down to the Mediterranean to sail through some of the Greek Islands.

Island Hopping in Greece

Hinemoa was born in an Alpine village and began its first journey as a twenty-five foot sledge of timber towed through the quiet streets one snowy night after the local gendarme had retired to bed.

After six hundred hours of construction and sheathing we assembled the pieces in the garden, dubbed them 'Solaris' and planted a barrel of beer on board to give it a dry run.

After a shakedown on Lake Garda in Italy we humped the 1200 pound boat onto a trailer and set off for the seaside. The 2000km to Greece were covered in three days, but swaying down the road to Asia with a 1700lb trailer behind a VW Beetle was quite an experience. (Also for the Beetle)

The following day saw us on the beach near Volos surrounded by an excited crowd of different nationalities all barking contradictory orders at each other in an attempt to get us launched. Finally we were afloat and motored to a quiet bay to recuperate for a day.

Our intention was to sail all round the Northern Sporades but terrible tales of the dreaded Meltemi made us a little apprehensive.

The barometer rose during the night to 'set fair' and we set off on our first leg to Trikeri island a few miles across the bay. In the middle of the Bay of Volos we encountered dolphins for the first of many times. They were heralded by what appeared to be a squadron of low flying jets which turned out to be a shoal of rather large, terrified fish with staring eyes and startled expression. They flew past us within a few feet oblivious of our presence, or so it seemed.

In the little harbour we renewed our acquaintance with Retsina wines and got well stoked-up. But wading back to the boat while acting as a tender to my wife, Bacchus got a hold of me and I let her, and even worse her bag, drop. Half the village seemed to be enjoying the spectacle of a row of bank notes and passports pegged out on a washing line to dry.

Then with a fair wind whistling on the quarter and a blazing sun before us we made good speed in sheltered waters before coming into the open sea. We took a buffeting from the short steep waves but the wind died towards evening and we were then becalmed and didn't reach Skiathos until the following day. This island has come of the most beautiful sandy beaches Greece has to offer., including the famous Koukounaries beach where we spent a few days moored in a little harbour watching the world go by.

The next port of call was Skopelos. Fitful breezes made progress slow but at last a vicious wind blew us dead on the bow and we battled against it. For an hour a large rock remained opposite us and I began to think that Wharram cats really don't sail on the wind, but there must have been a surface current or tide close in-shore because as I changed my tactics and headed out to sea we left the rock behind. Very hungry and cold we at

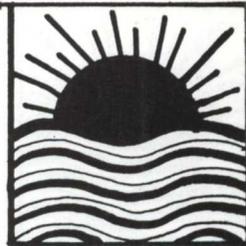
last entered the harbour of Skopelos. What a beautiful sight — white houses perched on the hillside crowned by a little church and a choice of inviting restaurants directly on the quayside. But there had to be a drawback. The whole sewer from the village oozed into the harbour causing an unbearable stench. At midnight it became overpowering and we moved out and cast anchor in the delightful adjacent sandy bay. This is exposed to the north and when at two in the morning the Meltemi suddenly blasted into the bay I thought it prudent to drop a second hook. Although partially sheltered for the worst of the waves by the harbour wall the wind pressure on the boat was such that I couldn't pull in the anchor against the wind — so I put the motor in reverse.

My second mate wasn't smart enough at pulling in the slack which promptly entwined itself round the prop. I had visions of the motor being torn off its mountings and the rear beam being destroyed and I hastened to free it, whereupon it slipped up between the rudder and hull and threatened to wreck the rudder — all things which have been adequately described in *Sailorman*. A paddle with a V notch sorted that out and we were back at square one.

This time the manoeuvre worked and with a howling cavitating Johnson we inched our way crabwise towards the harbour entrance. My son posted as lookout in the bow suddenly screamed 'Ein Fels' I took this to be 'Ein Wels' which is a large fresh-water fish. I craned my neck and observed an enormous black back just under the surface, and a second later a grating sound as we slithered over the rock told me it was time to get a deaf-aid. I learned a lot in those few minutes. A motor mounted on the rear beam is useless in a short sea and an evil smelling harbour is preferable to a wrecked boat on the beach.

We pushed on to Pelagonis the outermost island of the Sporades which is not just a bare rock. This waterless isle is paradoxically full of trees and shrubs and heady herbs. We anchored in a relatively safe bay and planned an excursion over the hills to a fjord on the weather side of the island. It was hot and at midday we were on an exposed ridge a few kilometers from the boat. We had lost our way. Exhausted and dehydrated we had even ceased to sweat and funny little yellow stars blurred our vision. The descent through the scrub tore our legs cruelly and cannot be compared with anything we have encountered in the Alps. Well, I suppose the saying about mad dogs and Englishmen is true — here's one mad dog who won't go out again in the midday sun! An Italian skipper with a short wave radio warned us of approaching high winds and advised us to get into the fjord at the other end of the island as fast as possible. This we did in the setting sun and entered the narrow formidable looking passage at dusk which closes in fast in the south. There was a fleet of charter boats with English crews hove up for the night but they didn't seem too sociable. Maybe Maxi 95 crews don't speak to mini multis. However, the next day when the promised storm had not materialised we fought our way out of the gorge against a heavy swell and pursued the fleeing Maxis. The technique was to creep up on them astern and watch them nervously reset their sails, change course and finally grudgingly return the dwarf's greeting as it surfed past. They still weren't cured because at the lose of day as we lay at anchor the fleet came in and an English-woman swam over and asked what kind of raft that was.

The Sailorman

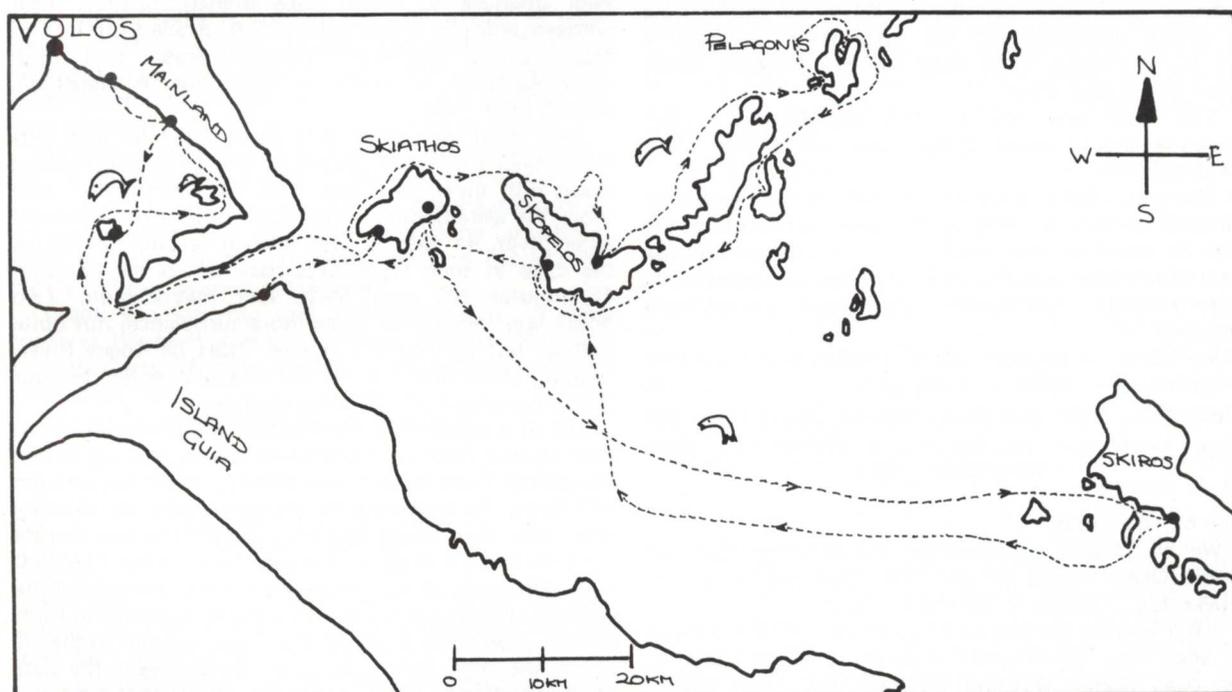


In lee of Skopelos island we potted about for a couple of days waiting for a chance to get across to Skiathos. We even sailed to the southern tip of the island but farked out on seeing the waves. We learned that the ferries had stopped running on that day and they aren't rowing boats.

We met up with a bold Dutchman sailing a six metre Atalata cat — a day sailer with tent accommodation. He had sailed all over the Aegean but the craft looked a trifle flimsy for forty mile trips across the open sea. One of his amazing lightweight pieces of equipment was an aluminium Danforth anchor. I caught him off Tchungri beach at a later date with flipper and snorkel and rocks on pieces of string. He admitted sheepishly that he was placing rocks on his anchor so that it wouldn't get away in the night. He also muttered something about wringing the neck of the fellow who sold it to him. He trailed the whole contraption behind an

the moon on the wrong side, shot out of bed and discovered that the mooring line to the beach had broken free. We were within feet of nasty jagged rocks.

After breakfast the offshore wind got so nasty that we decided to run before it under bare poles. Being in lee of the island the waves were not high. We found that the cat could be steered within a 60 degree sector before the wind without sail and was travelling faster than a fast walking speed. The entry to Linarias was a little tricky but we elbowed our way into a nice mooring and from there we explored the island by bus — making the acquaintance of one of my son's schoolmasters who was sleeping out in lee of the graveyard wall.



'ugly duck' - the Citroen 2CV from Holland — hence the attempt to save weight. Tchungri beach is the best I ever experienced — exotic evergreens in the dunes and sparkling clear warm water. There was quite a lot of tourist traffic in the Kaikis from Skiathos but everybody was evacuated at four in the afternoon and we had the place to ourselves. As the sun went down hordes of voracious horse-flies like little Draculars picked up our scent and we had to retire to the cabins till nightfall.

We made the acquaintance of an Australian who talked about thirty foot wives (waves) and enthralled us with stories of Spindrift — the Crowther cat — round the Barrier Reef.

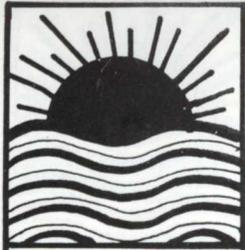
Finally after studying the sea charts we decided to risk the fifty-odd mile passage to Skiros from Skiathos. The beginning of the trip was fine and we made good speed till adverse winds forced us to change course and for four hours we saw nothing but bigger and better waves. Visibility improved towards sunset and Skiros jumped out of the sea smack on the bow. With a force six and waves to match behind us we romped towards our goal at a phenomenal rate of knots. Eleven hours after departure we arrived in the dark and nosed in among the rocks looking for a safe anchorage. Dead tired, cold and a little seasick we flopped into our bunks and fell asleep. I awoke in the middle of the night with

At last the time to depart came and we slowly made our way back to civilisation. Underway we crossed the path of the charter fleet with a freshly imported crew doing their fourteen day stint. We sailed through them like Drake through the Armada and this time they actually filmed us.

One of our stops was at an uninhabited island in the Bay of Volos which sported a deserted monastery which has not yet been vandalised by tourists. The island was well stocked with rabbits and the children of a Berlin couple running wild on the island readily recounted their father's successful harpoon hunts — poor rabbits!

Finally we made a reunion with a Greek family whom we had met on previous trips to Greece and there was a whale of a party in the olive groves. Retrospectively I would say the main enemy of the small boat man is the cold. In Greece the temperatures are always around thirty centigrade in the summer and we only had rain for an hour in five weeks. Toilet facilities on a Hinemoa are not ideal — bucket and chuck it as one man aptly put it. Warm water was easily obtained by placing a canister in the sun. By evening it was too hot to pour over your back.

Handholds in the form of ropes running the whole length of the platform are useful when the boats starts bucking and a safety harness can be clipped to these.



The leaking hatch problems I heard about in Sailorman were cured by using thick elastic strops with nylon hooks, hooked into rubber fairleads screwed into the deck stringers close to the hatches and stretched diagonally. They had the appearance of a Redcoat in webbing but there was no wet stowage on Solaris and we did get water overboard.

We didn't cook at sea because of the fire risk preferring to use the tiny more expensive camping gas cooker in the harbours for breakfast only. The reason being that the food in the restaurants was so cheap that cooking wasn't worthwhile. To give you an idea of the prices a meal with wine cost thirty bob. Still on the finances there were no harbour dues, nor did anyone in Greece challenge me for documents, although I did see the bigger craft used for charter work being asked to produce these.

The boat was heavier than the brochure said. Hinemoa should weigh 530kg and not 350kg. Mine weighed 580!

This was a holiday without temples, maybe you miss nautical terms like compass bearings but most of the time we could see our destinations. Perhaps you will say 'Too much land and not enough water' — but what is more beautiful — the land from the sea or the sea from the land?

My advice to anybody contemplating such a venture is 'Do it now — before it's too late!

Letter from Tom and Diane Bowlus about their trip from Vancouver to Eureka, California, in their HINEMOA, 1978

Dear Mr. Wharram,

We are pleased to announce the completion of our Pacific Ocean cruise in our 23ft. Hinemoa from Vancouver, B.C., Canada to Eureka California.

After leaving Vancouver on June 7th, 1978, we sailed to Neah Bay, Washington, stopping at Roch Harbour, San Juan Island, Washing, Victoria, B.C., and Sooke, B.C., laying over in Neah Bay or 10 days, waiting for weather change. The Pacific was experienced for the first time for us, and our humble craft, which we built one year previous to this letter.

What a beautiful experience! Hinemoa went over the 10ft. swells like a trooper. Made La Push, Washington, 8 hours later. Next, we went to Grays Harbour, Westport, Washington, after 12 hours of ghosting, motoring, seas 5–8 feet (Coast Guard weather information).

Left Westport and ran into SW winds. Decided to make Willapa Bay, Washing, only 20 miles South. Left Willapa Bay next day, winds 10 to 20 NW (as predicted). Getting across the bar was quite an experience. Seas running 10–20 feet. Up and over the grace.

Wind was really howling, encountered huge ground swells. Boat moving too fast. Seas breaking over bows while beating offshore. Decide to reef. What an ordeal! Not enough practice. Diane was steering. Brailled main in order to reef., lost directional control, took a couple broadside. Incredible design! I'm standing struggling with sprit pole on the platform, life line on, feeling no danger of being thrown in. Difficult to stand, but action of boat very good despite circumstances. Reefing finally completed. Clipping down coast toward Columbia River mouth, 25 miles away. Four hours later wind dying down to about 10–15 knots, pass lightship approx. 8 miles offshore, wind dies to 5 knots or so.

Next two days, light NW winds, 5–8 ft. swells; and on third day we're 40 miles from Coos Bay, Oregon. NW winds 15–25 knots, seas short 5–8 feet, coming fast. Scream along Oregon sand dunes at good clip, checking waves, surfing along. Timing the tide for Coos Bay entrance we brail top half of main, arrive at 7.30 p.m., exhausted, but feeling very high!

Sat at Coos Bay for one week due to high winds and fog. Fog stays. Decide to leave in it anyway as forecast calls for NW 10–20 knots. Cross bar in pea soup fog.

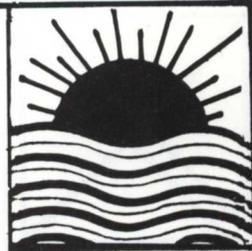
Winds are SW. Coast Guard failed again! Beat down to Bandon only 13 miles away. Rain pouring down. Soaked to the bone. High winds gusting to 45 knots predominate the next 3 days. Still blowing. Tired of waiting, we leave at noon, going over bar at Bandon (known to be treacherous) in 10–15 ft. swells, transparent on top, almost breaking. Up and over with GRACE.

Forecast — 15–35 knots, decreasing 10–20 at night. Well offshore to round Cape Blanco, furthest most western point in continental U.S.A. Brailled top half of main. Local fisherman sceptical, states that wind increases twice as much on this Cape as elsewhere. Reefed jib in case.

Seas most incredible, very confused. Like huge pits in between the waves. We would first be on top, looking down into these giant pits, then we were down inside them. We were bobbing over them without any difficulty whatsoever. In fact, it was a great feeling conquering the cape in such style. Seas back to normal in about 45 minutes, NW swell 5–10 feet, maybe more. Two hours later encounter some more turbulence, not quite so bad, but definitely a change. Must be Rogue River, Oregon, as we didn't know our precise position, but our DR put us about 10–15 miles offshore.

All of a sudden the wind really started increasing, the boat started reaching tremendous speeds, getting to feel dangerous. Took in main completely, reefed jib, we were still flying, hard to control, the wind really was blowing now, seas were bigger and breaking off the top. Decide it's time for the drogues. We used two anchor lines 300 feet each, with 20 feet of chain on each. Unshackled the anchors and connected the two chains together to form a hoop. Ran these lines off the stern, secured to the aft beam. the 3/8" nylon line just fitted between the slats of the platform. Took down the jib, at that time the boat didn't handle as well without it, wanted to broach, and required constant attention to keep its stern to the huge seas. We put up a small storm sail of about 2 sq. ft., but we don't think it was high enough on the forestay, as it didn't seem to do much for direction. We feared the jib was too much sail. Being so light, we felt we were still moving too fast, so we pulled in the brogue and tied a life-jacket to it, and ran it out again. That helped. We were going slow enough now for the waves to pass under us. We still had to steer the boat stern to, requiring our fullest attention to do this. By now it was dark, but we were fortunate enough to have clear skies and a full moon, enabling us to see the on-coming seas.

We relieved each other hourly at the helm, sitting on the platform facing the stern, steering us at full stern to the sea, or at best, quarter-to. It was so cold and wet that one hour was about all one could stand, when the helmsman would go below to rest and warm up. Around 1 a.m. the wind was still increasing. Having no idea just how much it was blowing, the wind was making a horrible whistling sound through the little rigging we do have. Every so often the sea would break and bubble up through the platform. How thankful we were that this area was not solid deck! Two or three times we would broach sideways and the seas pounded us broadside. The boat took it.



By 3.30 a.m. the wind finally died down. Left everything the way it was, tied tiller off, and crawled into our bunks and immediately fell asleep.

The following morning was beautiful! No wind, but huge swells. Motored due east looking for land. Our estimated distance offshore was 20–30 miles, as it took 6 hours to see land, as the fog was hanging in on the coast. Hove to that night, woke up next morning in pea soup fog.

Didn't know where we were. Motored due south. Two hours later we found Whistle Buoy. Identified it to be St. George Reef. We finally reached California!! Later we saw a fishing boat which confirmed our location.

With 40 miles reserve of gasoline, we decided to pass Crescent City and head for Eureka, in pea soup fog and no wind. Hove to that night, listening to Redding Rock fog horn. Woke up and continued to Eureka, about 20 miles South. Bummed some gas from a local fisherman at Trinidad Head. Arrived Eureka in early afternoon fog stayed in for 6 days.

We didn't want to attempt Cape Mendicino in thick weather. Heard from fellow yachtsman that fog extended as far as Santa Cruz, July and August being the worst months for it. Decided it was unsafe to trust our dead reckoning form of navigation in such conditions.

An offer from father to trailer us to his home in Yuba City, California, 300 miles SE, being two broke sailors, was accepted, and we now sit on the Feather River (where the photo was taken). We're looking for work as we're trying to trailer ourselves down to Florida and the Carriibbean, as soon as possible.

Thank you for your safe, ingenious design, it saved our lives. We built it exactly to plan, and wouldn't do it any other way. We have seen many altered designs, some good, some bad.

Thanks for designing such a perfect boat.

VOYAGE TO THE SUN by Hannes Wharram

On the previous occasion when I wrote for this journal, the Editor added the post script that I had last been seen heading for the hills with a rucksack. Since then, I have beaten a more permanent retreat shorewards but was delighted with a chance to cruise on the TEHINI this summer. That well known Wharram cat is now operating as a charter boat under the capable skipper-ship of Roger Knight. Nor is Roger new to the pages of this journal, for it was he who sailed his Tangaroa "NOAM AS DAI" on a remarkable single handed trip to the West Indies and back in 1975.

There was no trouble in filling the berths (an apt phrase when several people are sick!) as far as Las Palmas, where the boat is at the time of writing. If any of you are attracted by the idea of using your cat for charter, I wish upon you a better day for the first customer to arrive. TEHINI was firmly beneaped on the grass above the quick-mud. The howling gale which blew the bucketing rain horizontally could not screech through the rigging because the masts were down. The customer, George, asked Roger when he expected to reach St. Lucia, W.I. "November 15th", replied the skipper unequivocally.

That happened a week before our sailing deadline — a hectic week of remasting, shopping, packing, equipment repairing, trial sailing and tidying up. Early in August we set sail for the Azores from Ireland with a full crew of ten — five English, two Irish, two Americans and one Canadian. Had a selection committee searched for ten more diverse individuals, they could not have been found. The amazing thing was that we worked together very well.

On the second day out, strong head winds shook us ship shape and on the fourth night we actually had to heave to in a southerly force seven. Apart from that, there were no strong winds and what happened is merged in my memory into a simple pattern of food and sleep, sunlight and darkness, sea and sky. We were blessed with sealife all the way; dolphins played in the bow wave, shearwaters swept the waves upon their long straight wings, petrels flipped between the masts, kitty-wakes glided on the updraught of our sails and sometimes we carved a dazzling night path of phosphorescence through the sea. All that and sharks, turtles, flying fish and Portuguese men O'war too. We were sailing south; into the sun and warmth, along the diamond studded spangling roadway which the sun lays upon the sea. The colour changes of ocean and the sky were endless and awe inspiring. The moon waxed to rise at eventide into a salmon pink sky as the sun slipped over the horizon like a red rubber ball.

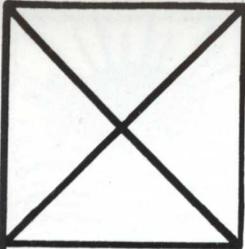
The wind blew in strict accordance to sod's law — on the nose. No weather chart could persuade it to do otherwise. When the calms began they were at first quite fun. We could swim in the sea, listen to music on deck and spend hours putting the world to rights. During a flat calm we had a mass hallucination of a northerly wind, but six hours later the bottle which we had thrown over the side was still in sight. After about ten days sailing (or not sailing) we were well behind schedule and south of a direct route to the Azores. We chose to go to Madeira instead.

Madeira turned out to be an ideal port of call, and we were lucky in that Roger had local knowledge of the anchorage. For those of you who want to visit a very beautiful, friendly and cheap place, right on the main sailing motorway to the West Indies, I will pass on the anchoring details. The harbour (Funchal) is quite small and to prevent swinging, we had to anchor fore and aft. We had both anchors prepared, motored close to the harbour wall, turned, dropped the stern anchor and crept forward before dropping the bow anchor. Our two American guests had to leave us in Madeira, to return to business and one of our English guests had discovered what seasickness is like and also left.

The next leg took us to Las Palmas, Gran Canaria. This turned into something of a drift voyage as the Canarian current did almost as much work as the wind. The days were too hot for me but the nights were just warm enough. After six days we sailed into the oil slick which always lies aft of Las Palmas harbour and that was the end of my voyage.

TEHINI sails on and is now bound for the West Indies. No cruising manual can describe sailing: the ship-board privation set against the boundless sea; the discipline of the elements against the freedom of travel; the blank sea covering an ocean of life; the clean horizon with the promise of land and ships over it. Nor can reading a book like "Heavy Weather Sailing" immunise you against what my father has described as "Sea Shock". Nor can a book teach you to sail. I write all this as a blatant advert for TEHINI cruises!

I toured Las Palmas on foot, walking from travel agent to travel agent — in order to arrange a flight home. One day, I had just walked my feet off when I met Roger, who reminded me that he had stipulated that all crew and guests must have onward tickets. What is more, in future, those without such tickets will not be allowed aboard!

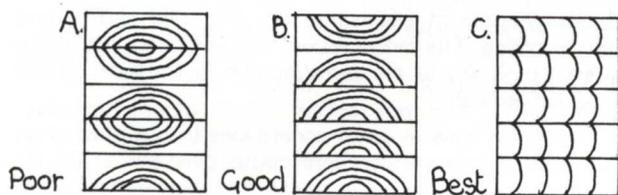


CROSSBEAMS

CROSSBEAMS — some ideas and calculations by Herbert Robitzsch

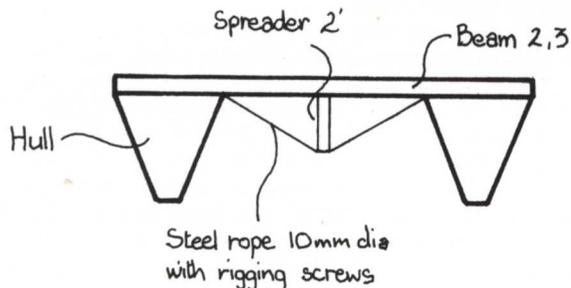
I would like to present a few ideas and calculations about crossbeams. In the plans, the construction of the crossbeams is described. It suggested that if the first plank of wood in the lamination is curved, then the second should also have a slight curve in it in the opposite direction, so that when both pieces are glued together, the lamination will be straight.

In the literature about the architecture of wooden laminated houses, there are some good recommendations.



- It is bad practice to combine planks with annual rings in this manner.
- You should laminate the planks like this, making sure that there is only one inversion of the annual rings, because the inner side of the plank is harder and should be upturned and exposed at the top and bottom of the beam.
- If you could obtain planks quarter sawn (see Dec. 77 Sailorman p.10.), you would get the best results. This is the most expensive way to cut timber.

Since the maximum applicable downthrust increases by the square of the length of the beam, the addition of two extra layers to the 13 layers in the beam of a Narai increases the strength by 33%. A further way to increase the strength of a beam is to add a steel rope and spreader under the beam. It is possible that the mast could be lengthened so as to incorporate the lower two feet as the spreader (using a tabernacle to support the mast at deck level. I'm not sure whether this would give enough flexibility between mast and beam. I understand that some builders have made beams using GRP and even steel.



Here is some advice about the necessary calculations: Depending upon their construction and the materials used, a beam can only resist a maximum force F . The maximum force on Polycat beams occurs at the point where the mast stands on the beam. This force should never be greater than:

$$F < 8 \times \theta \times \frac{W}{1}$$

θ = maximum stress or strain on material
 1 = length of beam
 W = concentrated midspan load.

some examples for W are:

SOLID BEAM

$$W = \frac{B \times H^2}{6}$$

HOLLOW BEAM

$$W = \frac{1}{6H} (BH^3 - bh^3)$$

HOLLOW ROUND BEAM

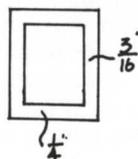
$$W = \frac{D^4 - d^4}{10D}$$

Some examples:

- The original Narai beam (12.5 cm x 29 cm)

$$W = \frac{12.5 \times 29 \times 29}{6} = 1800 \text{ cm}$$

- To build a hollow steel beam.



wood is 6Kp/mm²

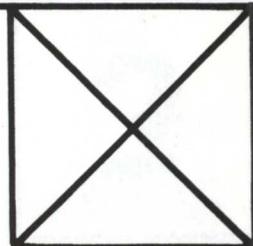
steel is about 37 Kp/mm²

(Kp = 1000 pounds)

$$\text{then } W = \frac{1800 \text{ cm}^3 \times 6}{37} = 292 \text{ cm}^3$$

for steel top and bottom $\frac{1}{4}$ " (.625 cm);
for steel sides $\frac{3}{16}$ " (.47 cm)

$H = 29 \text{ cm}$
 $B = 12.5 \text{ cm}$
 $h = 27.75 \text{ cm}$
 $b = 11.56 \text{ cm}$



$$W = 1 \frac{(BH^3 - bh^3)}{6H} = 332 \text{ cm}^3$$

3. To build a GRP beam around a hollow tube

θ for GRP 30% glass is about 10 Kp/mm²
 then $W = 1800 \text{ cm}^3 \frac{6}{10} = 1080 \text{ cm}^3$

D = 29 cm d = ? try d = 25 cm

$$W = 1 \frac{(D^4 - d^4)}{10D} = 1091 \text{ cm}^3$$

(about 25 layers of a normal woven roving mat will be sufficient)

As steel is 11.7 times heavier, GRP 2.6 times heavier than hardwood, the original beam of a Narai will have the following comparative weights:

hardwood	22 Kg/m	length 100%
steel	32.7 Kg/m	length 150%
GRP	29 Kg/m	length 132%

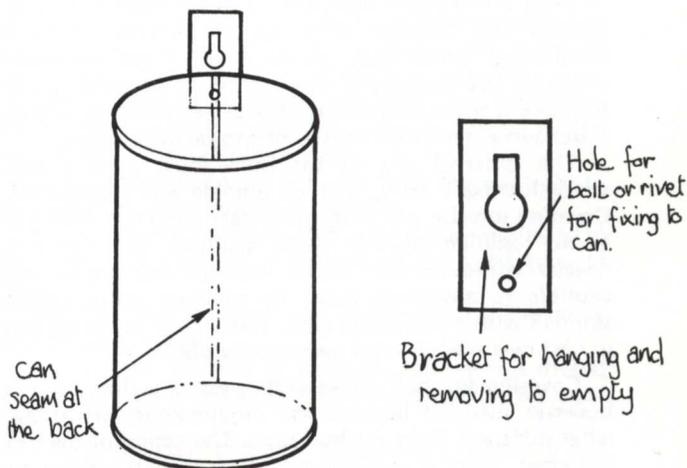
For foam sandwich: H=29 h=21 B=12.5 b=10.5
 W=1193 16 Kg/m length, you get even better results!

The spreader or dolphin striker and steel rope stay below the beam are not included in the above calculations.

Anyone unsure of the above calculations or wanting more detail should contact Herbert Robitzsch, Wixhauser Str. 49, Ershausen 6106, W. Germany, who says he would be glad to help clear up any outstanding points.

(see Sailorman Dec. 77 p.10 for comparative thoughts and calculations)

Ash tray or rubbish bin to stay put.



This idea is to stop you having to keep cleaning up knocked over bins and ash trays

Clean off lables and surplus metal from size of can required. This can then be spray painted or covered in fabric, PVC etc. Fix bracket for hanging as required.

AZORES RACE

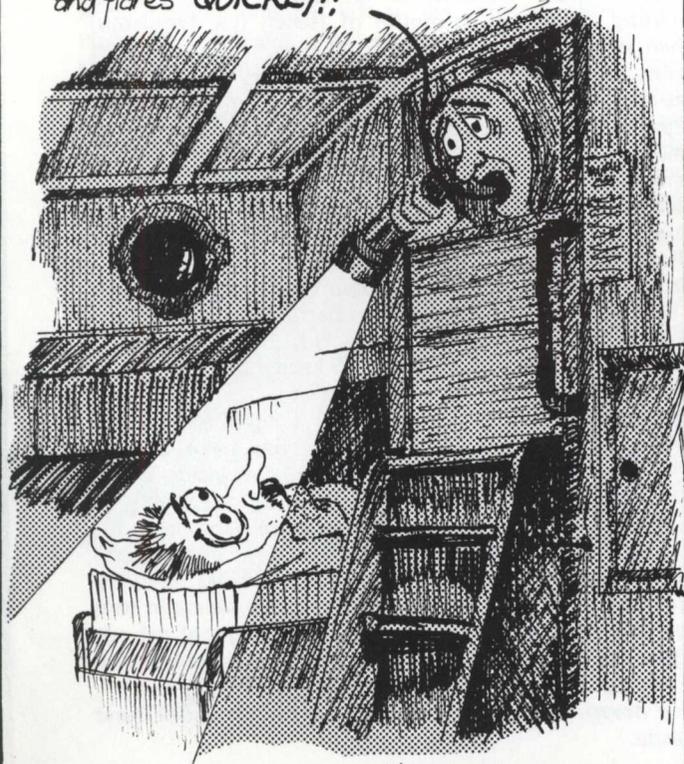
1979 and then to the Med.

When George Payne sent me his article about man-overboard, he mentioned that he and Joyce were preparing RAKA for the Azores Race again. Their plans are then to cruise down to the Mediterranean via Gibraltar, and then eastwards towards the Greek Island. The cruise is planned for about a year, after which RAKA will be sold.

We wish you well and hope you have a great year for your sailing. I shall be with you in spirit all the way.

RNB.

Don't panic Dick, throw me up my life jacket and flares QUICKLY!!



YACHTS and YACHTING APRIL 1976



SAVE-AS-YOU-LEARN

by George Payne

I was asked the other day if I had any suggestions about saving money when building a polycat. My first reaction was that, looking back over seven years of sailing RAKA, I am glad I chose the best and often most expensive materials, good quality marine ply, columbian pine and epoxy paint, as she is still in perfect condition. So no long-term savings can therefore be achieved by buying inferior materials, but some can be made by analysing the function of each piece of material used in the construction.

Take for example deck planks which must be strong, durable and non-slip. Why not use timber which is rough-sawn rather than planed when it will be much cheaper? The covering of wood whiskers closes the pores to make it more weatherproof and also provides a skid-proof surface without the use of special deck paints.

The external ply of the hulls must have a high strength/weight ratio, and be durable and waterproof. Covering inferior ply with fibre glass and resin does not in my opinion provide these qualities. The result is heavier without much added strength and highly susceptible to absorbing water by capillary action unless skinned with exceptional care. There may be no savings in cost over well-painted best quality ply.

Covering the hull decks with glass or nylon cloth is however justified because the requirements are somewhat different from the hull sides. The action of the sun is fiercer, there is scuffing and concentrated loading by crew walking on it, there is rain which rots timber, and there are the ply edges at the bulwarks to protect. No savings here - the best ply, good cloth and preferably epoxy as the adhesive.

We now return to the hull sides, and I am recommending epoxy paint - the most expensive of all! I swear at it when applying it, and swear by it when it is on. It requires no primer or undercoat, it is almost impervious to water, it is exceptionally hard, and once the initial coats are on, spreads a long way. The snags apart from the expense are that it is tricky to apply, going treacly very quickly, and the surface has a powdery appearance after about a year due to the action of the sun's ultra-violet rays. This film can easily be washed off to reveal a sparkling new surface.

To obtain most of the benefits of epoxy paints without excessive cost I can recommend experimenting with Hevikote obtainable from Thomas Ness Ltd., Nantgarw, Cardiff CF4 7YH. This is an epoxy pitch coating, combining the properties of the most durable of modern materials with the most durable of the historic ones. It is ideal for underwater surfaces, the beams and slatted deck, can take the place of galvanising, and is useful in checking corrosion under the car for the next five years while building the boat. The only point against using it on the hull sides is the somewhat depressing appearance. A new treatment made in Falmouth from scrap plastic, may be worth investigating too.

Analysing the functions of the beams could also lead to savings. The timber used in the middle third of the depth is much less stressed than the top and bottom laminations. Only the best without knots, shakes or joints should be used in the outermost layers but relaxing the standard towards the centre line could save cash with negligible loss of strength.

Writing this has led me to start thinking about ways of saving when the basic construction is complete. Here my rule is never add anything unless you can think of at least two good reasons for doing it. This has sometimes led to some interesting results which I will tell you about next time.

HARBOUR INFO

By Richard Woods

Yarmouth. Very crowded harbour. 3p/ft./day x 1.5 for cats.

Hamble. No multis allowed on marinas, river very crowded with moorings.

Wicor Marine. Foreham Creek, Portsmouth. Lay up space ashore or mud berth at 9p/ft./week. Sheltered except possibly from N.W.

Cowes. Osbourne Bay. Good holding and sheltered from N.W. - S.E. No facilities and do not anchor on Queen Victoria's bathing house slipway!

Chichester. Anchor at East Head on sand, need not dry out - very crowded but engine not required. £1 a night unless lucky like we were.

Shoreham. Turn to port on entering and motor up past all wharfs, (apparently disused). Anchor or see yacht club for moorings.

Brighton Marina. Lived up to its reputation. £8 a night for 35' cat! Also it has a very dangerous entrance in some conditions, nor necessarily when windy. If you must go in sail in, not motor, past breakwater and then lower sail and start engine (you'll have 100 yds).

Southampton. Calshot, isolated, mud, exposed from N. western shore exposed to N. and S. - S.E., good holding, or go up to mouth of Itchen (i.e. Woolston) then sheltered except for S.E. - (catch) only 200 yds from main sewer! Southampton S.C. very friendly with visitors. Moorings, no engine needed. 10 mins to shops.

Plymouth. R.W.Y.C. Visitors moorings by entrance to Millbay Dock £2 a night but noisy as next to ferry terminal.

Salcombe. We carried on up river past the I.C.C. headquarters and moorings and anchored in soft mud. No charge but we were only there 1 night.

Brixham. No room inside harbour wall to anchor. Needs a reliable engine to reach visitors berth. We anchored just outside moorings, exposed to S - N.E. but no charge.

Exe. Has very strong tides (over 5 knots) but can anchor in mud inside entrance to port - dries.

Lymington. Marinas average £4.50 a night for 35' cat, if you can get in OR anchor in Pyrewell Lake, at L.W. is 3' deep. Sheltered from all directions as inside a mud flat, but need a good engine to get out and preferably on dinghy as its a 20 minute row to shore. No charge for 3 days. The visitors pontoons are now only at the Town Quay at head of river past the marinas. It's very crowded in summer and we did not think we could turn round or stop in the space left - certainly not get out again. Advise checking space available first before getting into trouble.

Key haven. Temporary anchorage at mouth under Hurst Castle.



A NOTE FROM THE SAILING SECRETARY

By Mike Briggs

Readers may remember that in a previous article I predicted that the time would come when "yachtmen's driving licences" became a mandatory requirement before putting to sea. Well, several European countries (NOT including the U.K.) now REQUIRE all yachtmen sailing in their territorial waters to have a "Helmsman's (overseas) Certificate of Competence". These certificates can be obtained from the R.Y.A. who also publish an application form which includes a list of those countries which have imposed this new restriction (France, West Germany, Spain and Italy are included). To be eligible for one of these certificates, applicants must produce either: an R.Y.A. Proficiency Certificate (of the type taught for and awarded by the PCA's Sail Training Facility), or a Declaration from the Secretary of an R.Y.A. recognised Club or Association, or from the Principal of an R.Y.A. recognised Teaching Establishment, that the applicant is competent to command his yacht.

If you intend this year to visit one of these countries, I recommend that you do one, or both, of the following:

- 1) Write for an application form (Ref. F5/1/179) from the R.Y.A., Victoria Way, Woking, Surrey GU21 1EQ.

OR

- 2) Write to me (58 Cornwall Gardens, London SW7) if you need a declaration as to competence. I will arrange for a Sail Training Facility instructor to meet you and, if necessary, make sure that you ARE competent!

The same application form can also be used to obtain "Unregistered Ship's papers" to make customs clearance easier.

I need hardly say that the growth of bureaucratic regulations of this kind is an unwelcome intrusion into what freedom there is left to the offshore sailor. The evidence is, however, that these rules are being strictly enforced in certain places, and on-the-spot fines and other penalties have already been imposed on U.K. (and other) yachtmen failing to carry the proper documentation. While the P.C.A. takes no delight in getting involved in such bureaucracy, it can at least try to see that the acquisition of these certificates by its members is made as painless as possible.

Partly as a result of this new development, but mainly due to the increased demand for sailing instruction, the Sail Training Facility is short of instructors. Would anyone, in or outside the U.K. who thinks him or herself (a) qualified and (b) willing, to do say, at least 2 or 3 weekends a year catamaran sailing tuition in his own boat or that of the applicant please write to me or to Bob Evans (P.C.A. Chairman). Most of the demand seems to relate to Polycats of Tangaroa size and above, and is by no means confined to the U.K.

Meanwhile, happy sailing.



Comments on the 'Beamlashing System' as described by P. Strings in the last Sailorman (December 1978)

By Hanneke Boon

I would like to point out some of the disadvantages of using this system on our first range of designs, i.e. the straight V hull, not the PAHI.

This 'lashing system' is being used on our new range of 'Pahi' designs where the beam position and hull shape is highly suited for this system.

On the Tangaroa though, it will make the boat rather an unwelcome visitor in harbours and alongside other yachts. (Because of its shape the beams will protrude much more than they do on the Pahi designs).

James altered this system, which he used on Rongo, to the now existing system, i.e. steel bolts and rubber mountings, for exactly this reason.

The protruding beams will also spoil the clean shear-line made by the continuous bulwark.

If you do decide to use this system it is important to use the right number of lashings of the right type of rope.

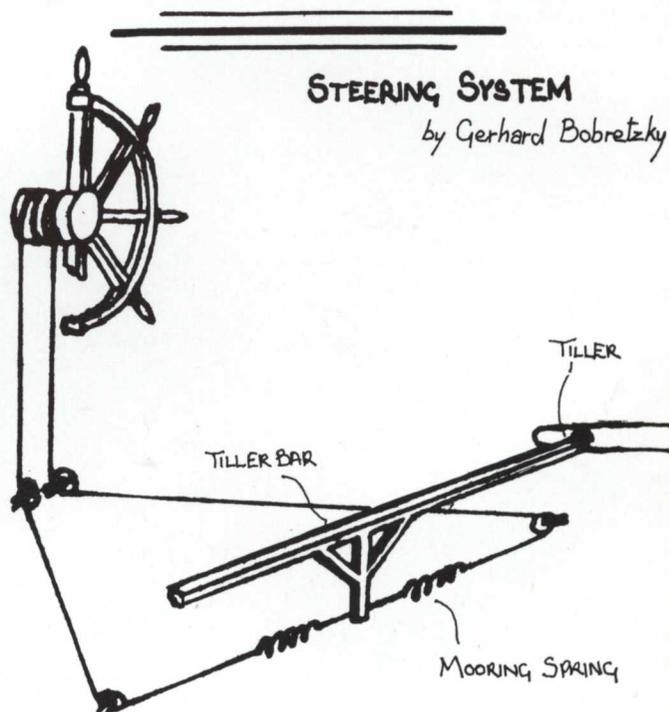
We had this worked out and tested by the main British rope makers.

For a boat the size of Tangaroa the lashings should be: 6 full turns of Super Polyester Braidline for each lashing.

This lashing will give the right amount of *stretch* and *strength*.

Also be careful to make the beams long enough so the lashings cannot slyp off the end.

(Apologies to James Wharram Associates and P. Strings. The sketch submitted for publication did include the words . . . 6 full turns of Super Polyester Braidline for each lashing . . . These were accidentally left out during publication. Editor)



The Sailorman



SOME THOUGHTS ON PLEXIGLAS WINDOWS By Roly Huebsch

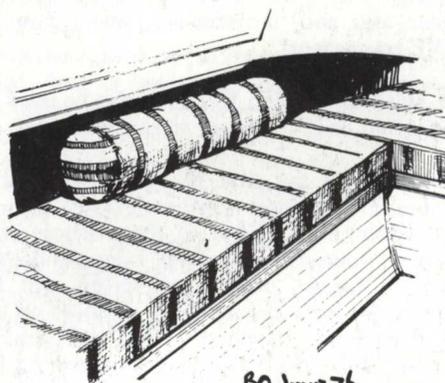
I have noticed one mark that immediately identifies an amateur built boat and that is a plexiglas cabin window attached by a neat row of screws or bolts passing through holes in the circumference of the window. If the installation is more than six months old, close inspection will invariably reveal a network of fine cracks radiating from each bolt hole. In a few years these may lead to a complete failure of the window. The reason for these poor installations, I believe, is that few people appreciate the very high coefficient of thermal expansion of plexiglas. A two foot long cabin window installed on a sunny summer day will shrink over 1/8" during winter storage. Considerably more than the surrounding wood. It may easily be seen that to be through fastened (which is not recommended) the bolt holes must be drilled at 1/16" oversize. A better installation is to use a rubber moulding made for the purpose such as is seen on many fibreglas yachts and car windscreens. This moulding must be matched to the cabin wall and the plexiglas thickness. Some of these mouldings have a groove for a hard plastic or metal locking strip. This, when pressed in, causes the moulding to lock on to the window and cabin side. An even stronger installation is to allow the plexiglas to float in a wood or metal channel allowing room for expansion and with the window set in one of the many permanently flexible sealing compounds now available. Both of these installations have higher impact strength than the bolted on window as stresses are spread evenly around the edge of the plexiglas and not concentrated at the bolt holes. Corners of plexiglas panels should be rounded and the edges sanded to avoid nicks that might lead to stress concentrations.

Plexiglas panels may easily be moulded to a simple curve as for a skylight in a cambered cabin top. First make a male mould of the curve from thin plywood with suitable reinforcing ribs. This is covered with flannel pulled tight and stapled under to avoid marking the soft plastic. Two wooden battens for clamping the edges of

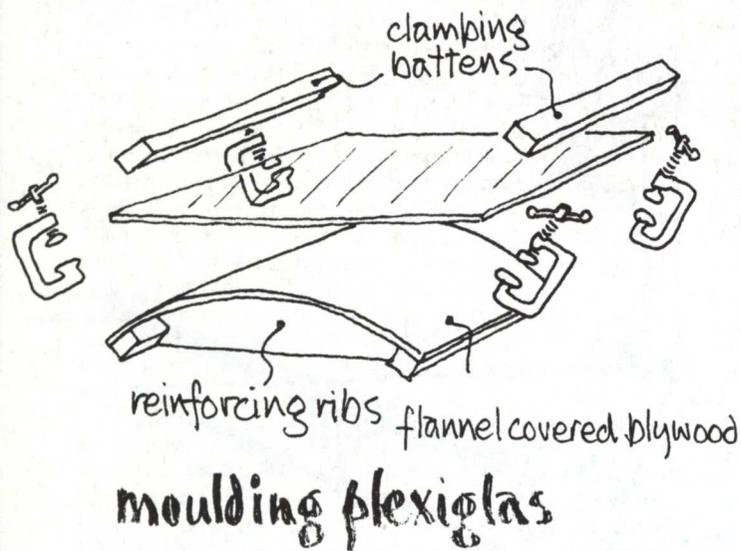
the plexiglas panel are similarly prepared by covering with flannel. The mould, with the sheet of plexiglas cut slightly oversize resting on it, is placed in your oven and heated *slowly* to around 350° F. The plexiglas will then have become soft and the edges may be clamped down. (note: if the panel is large it may bend to the form of the mould under gravity as it becomes soft, however it should still be clamped or it will straighten out a little as it cools). The mould and plexiglas must then be allowed to cool slowly *in the oven*. When cold it is ready and may be removed from the mould. Too rapid or uneven heating or cooling will set up internal stresses in the plastic. Overheating will lead to the breakdown of the plastic with the release of unpleasant fumes.

Bed - Bags ?

IN SMALL CATS WHERE STOWAGE SPACE IS AT A PREMIUM, TRY MAKING YOUR BUNK CUSHIONS / PILLOWS INTO SMALL DUFFLE BAGS, THESE CAN BE FILLED WITH CLOTHES, BEDDING ETC.



BO June 76



LONDON AREA WINTER MEETING

P.C.A. members are invited to attend MOCRA-AYRS meetings at the Cruising Association, St. Katherine's Dock, near Tower Bridge. Meetings are held on the first Tuesday of the month from October - April, and start about 7.30 p.m.