The Sailorman

Journal of the Polynesian Catamaran Association

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THE POLYNESIAN CATAMARAN ASSOCIATION

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All communications to: 57 Woodford Road, Bramhall, Cheshire.

EDITOR'S CHAT

SURPRISE ? SURPRISE ?

Isn't life surprising ? Only a few weeks ago I was moaning to Pat Stewart that I had barely sufficient material for four pages of copy, when, WHAM! suddenly several articles and snippets of news appeared in my post. Well here is the latest SAILORMAN to prove it, and the lot you are going to get for 1970

MY GUESS

Having been settled in the Editorial chair for nearly a year now, this is my guess how it is. During the season most people are busy playing about with boats, quite naturally. Come the dark days, and after laying up,they are busy playing about with their wives and girl friends, whom they have neglected during the season. So it is not surprising that they don't think of dropping a line, to me, until about this time of year. All very well, I may say, but it does leave us with rather a poor return for the rest of the year. This brings me to an idea that has been buzzing around in my nut for the last six months and which I hope to bring up at the A.G.M.

WHAT TO DO ?

We could continue in our present style, or in view of the aforesaid,make it two issues per year instead of three. Or, wait for it ..... we could have a properly printed issue once a year. Just think of it, one bumper issue, packed with double or treble the fun, photographs of gorgeous craft (boats I mean), jokes, nautical crosswords, etc., altogether a splendiferous offering. The only thing that really bothere me about this idea is the position of the isolated enthusiast, who needs the stimulus of regular contact with PCA to sustain his enthusiasm. Anyway, think about it and let me know how you feel at the A.G.M.

CREW, EX, & MART

Several readers have written to say that they would like to crew with POLYCAT owners with a view to experience of the design before they build Any offers ?

HALVE THE WORK

Prospective builders have written to say that they would like to co-operate with others in building and running POLYCATS, again any offers ?

HAVE CAMERA, WILL TRAVEL

If any of you proud POLYCAT builders would like to invite me round for a chat or a sail, I would be delighted to come. I travel light with a sleeping bag, life-jacket, some baccy and a fund of funny stories. (Well I think they're funny). However, be warned, anything you may say will be taken down and may be used in an article about you.

ANY QUESTIONS ?

We get a number of enquiries requiring answers that we are not able to give. We like to help fellow POLYCAT enthusiasts at all times but please help us to help you. Write to the address at the front of this issue, enclose a stamped and addressed envelope, if you want a reply, and above all write so that we can read the damned thing. We will pass your letter to the person qualified to answer it. All this may take time, so please be patient.

YOUR EDITOR

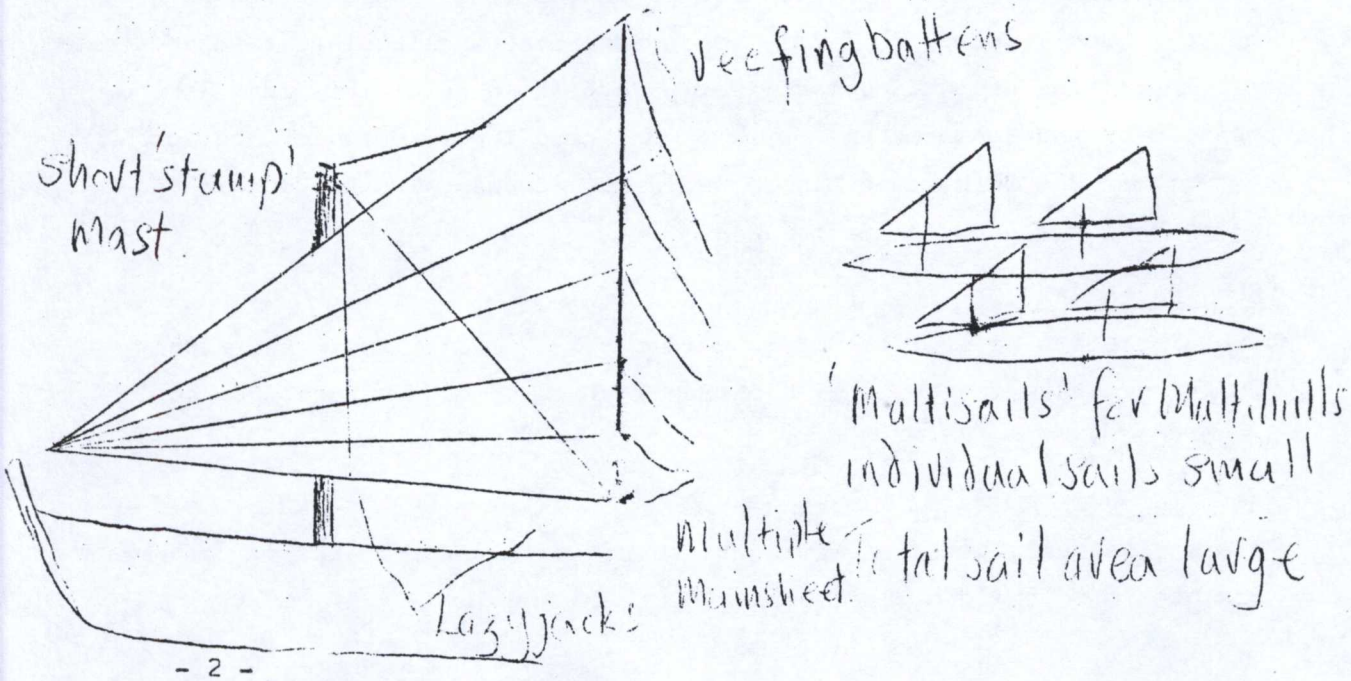
BOB SAVAGE.

IS IT ALL JUNK ?

In this issue, as in many previous, you will find a preoccupation with the "Chinese Junk Rig". The advantages of the rig are now well known, as for the disadvantages, you will read more later.

THE HYBRID LATEEN/JUNK RIG

The mechanics of the lateen sail are easily understood. Some pundits claim that a well designed lateen is more efficient, on ALL points of sailing, than an equivalent bermudan. The snag of course is the handling of the lateen, particularly in the larger sizes. If we can "marry" the ease of handling the junkrig, with the efficiency of the lateen, can we get the best of both types in one, cheap to produce, sail ?



JIM'S COLUMN

Since I last wrote for "The Sailorman", TEHINI and crew have sailed over 1600 miles. The first item of information to pass on is that about the first 1400 miles was unpleasant due to the weather conditions, and to our destinations. In fact, if I had not known the conditions were not "normal" sailing conditions, I could have been put off sailing for life,so, anyone who has built one of our cruising designs, particularly if your family is not 100% convinced of the need to go sailing; for the first few cruises, take it easy, ease yourself and your boat into intimate communication with the sea, with some short sails. Pick suitable weather and try to plan a cruise so that you have an easy port to enter,either on the beam or downwind. With a few comfortable sails under your belt, you will build up a rapport with the boat and your family can take its first unpleasant weather knowing that "It's not like this all the time" !
If it's any consolation to builders, at some time or other, I get seasick, and so do practically all the TEHINI crew, except Ruth. (It is also comforting when you pass a single-hulled boat and see it rolling heavily!)

The Junk Rig on TEHINI is a mixed success. It works far better to windward than I imagined and it is certainly easy to reef in bad weather. TEHINI has averaged 8 - 10 knots over.one run of 19 hours, and another of 7 hours, in force 3- 4, with the wind just forward of the beam.
It has not been a complete success, because the TEHINI hull form is faster than I expected. Going to windward, TEHINI can pick up a hull speed, in force 4, of 10 knots plus. At this speed to windward, the Junk Rig does not operate efficiently due to the proportional pressures of the wind creating eddies on the various battens, sheetlets, etc.,
I had to retire from the Round Britain Race because when beating to windward in strong winds at 10 - 14 knots, I could not slow TEHINI down to a workmanlike speed of 5 - 6 knots, except by taking in the mainsail completely, which meant the rig would no longer point high enough to effectively beat the necessary 100 miles to windward, (around the Skelligs).
After an ocean voyage this winter I am going to develop a rig which will better use TEHINI'S speed potential, probably a two-masted rig similar to the one Tabarly had on Pen Duick IV.

Anyone who is considering entering a boat for racing will have to face the fact that offshore racing against other racing multihulls will cost a lot of money. The Round Britain Race cost me nearly £500, but the equipment and sails of the TEHINI were poverty stricken by the standards of other racing multihulls. For example. other multihulls had £1200's worth of electronic navigation and sailing gear on board alone. Winches become vital when racing. Step by step the costs mount up.

Many builders have no interest whatever in racing, but for those who have, we do have very fast hull forms, particularly in the TANE, RAKA, ARIKI and TEHINI range. To get the best out of the hull form's potential is going to require more development, and, I'm afraid, money spent on sail rigs, though if builders can run class racing amongst themselves, with class rules, it will prevent costs rising high.

The capsize of Apache "Sundancer" in the Round Britain Race probably sent a shudder through most builders, who no doubt had to explain to friends why it would not happen to a "Polynesian Catamaran". Here are some further facts on the capsize. "Sailcraft" advertise the "Apache" as a bigger "Iroquois" and according to the last statistics I received, the "Iroquois" has 40 times more chance of capsizing than a Prout, Bill O'Brien or Wharram catamaran design !

I have sailed an "Iroquois" and a very pleasant sail it was, too. We got it sailing at 10 knots, (wind force 5, smooth sea), and occasionally, 15 knots, but I was at the helm, with one man on the jib sheet and another on the mainsheet. The moment she heeled, both men eased the sheets and tightened them in as the gust passed. We sailed her like a big planing dinghy, but it required constant attention. Of course, she could have been reefed, then she would have been relatively slow, but safer. Apache "Sundancer", as a bigger version of "Iroquois", had to be sailed in exactly the same way, particularly as her interior was completely devoid of normal cruising gear. With "Sundancer's" type of hull form, maximum speed is only obtained by minimum weight loading. She survived some very bad weather, but I believe that ultimately sheer exhaustion slowed down the reactions of the crew, and over she went.

The hull form of Polynesian Catamarans sail at their best when they are loaded. Then, their capsizing point is so high up the wind scale that long before you reach this point, you will be only too pleased to reef.

Returning to the subject of rigs, in future I'll recommend the Junk Rig for out-and-out cruising, i.e. for long ocean passages, and particularly if a builder is short of money and wants to make his own sails. The rig is perfectly suitable for TANGAROA's and "beamy" NARAI's which normally have a cruising speed of about 5 - 7 knots.

In Crosshaven, I was interested to see Chichester's new boat. It has a Trysail Ketch Rig, very similar to ours on NARAI and ORO, except for the Main Trysail which is used only in very light winds. He was going to windward and manoeuvring the boat around with his 2 headsails, mizzen staysail and mizzen. Well worth trying for those builders who have the rig on NARAI's and ORO's.

Everyone will be glad to know that the structural strength of TEHINI

has been very successful, remembering that proportionately she is built lighter than any of my designs. After all the battering she has received, including bouncing up and down on the beach, her bilges are still dust-dry! The foam and fibreglass constructed multihulls which were entered in the Round Britain Race suffered continuous leaking, due to building them as light as equivalent sized plywood multihulls. Undoubtedly, plywood is a superb material, but there are many people who just have not got the time to build the basic hulls of our boats, so we shall have to put fibreglass hulls on the market for owner completion, but we will make certain they have the strength and quality of good plywood hulls.

That's a round-up on the TEHINI news. We will be making a long ocean voyage, (at least to S.Africa) this winter, and gaining more information for Polynesian Catamaran Builders. In the meantime, we have good hull forms, we have rigs which are fairly economical and efficient for all general purposes, but for those who want ultimate speeds and excitement, then we have a lot more to do. There are enough of us, if we pool our ideas, to make it an economic possibility.

A.G.M. Notice of A.G.M. available later.

What's in a name?' PAUL GARNHAM

Polynesian Catamarans deserve Polynesian names, thus the class names Hina, Tane, Tangaroa, etc., seem so apt, names which Jim has borrowed from Polynesian Mythology. A scan through a book on the mythology of the Pacific Islands provides a rich source of further suitable names,(despite the number which Jim has seized !) In this way we drew up a short list of names for Oro No. 20, including Tuli (Bird messenger of Tangaloa), Tangaloa (supreme creator), Ta Aroa (father of Oro) and the final choice Tawhiri (God of winds and storms) (might come in useful).
But there is a limit to the number of these names, and as all Polynesian Catamaran builders will not register their craft, duplication will occur, and can surely be tolerated.

If Polynesian names are discarded, choosing a name can be a tricky business. A thing of static and dynamic beauty, such as a steam engine a ship, or an aircraft, deserves I believe, a name which befits the dignity of such an object, and certainly does not deserve a name which is an insult or a joke. Names such as"Overdraft", "Super ..... docious", and, seen recently on a superb piece of traditional craftsmanship, "Idle Duck", are inappropriate for any craft other than the boxier kinds of mini pram which the crews of mini monohulls row laden to the gunwales around the moorings.

Names are after all very much a personal matter; perhaps the name or the reason for its choice should be the secret of the owner. Several of my friends have named their craft after their wives, revealing perhaps gratitude (or guilt) for the toleration of months of domestic neglect and diversion of the joint account.

Once the choice is made, you're rather stuck with it, for whilst you can risk the wrath of the Gods by changing the name of a boat acquired second hand, to change a name chosen by oneself is probably too much for the ego (like admitting that the hull colour which you chose clashes with the colour of the sails which you ordered. There are other considerations of course. The name identifies the craft and should be easily read if not understood by landlubbers and seamen alike - imagine the lifeboat circling and hailing "Ahoy there Hairy Fairy" (or in the North West Hurry Furry). What would Spanish or for that matter English Customs make of "Tighna-Bruaich" ?

Perhaps the sense of mystery is exciting.

Names can be expensive. When I enquired recently about the price of perspex lettering I felt suddenly that Tuli should have been chosen at six bob a letter.

Incidentally, John, how the hell do you pronounce Ngataki ?

Resolution

I must resist the temptation to abbreviate Polynesian Catamarans to "Polycats" or we shall be mistaken for something by Polycell-Prout.

P.G.H.

FANCY A SANDWICH ? Letter from Clay W. Philbrick, P.O.Box 83.Vashon.Wash.

This letter is mainly in response to Peter Lord's letter on page 13 of the May issue. I built a Wherry type of rowing boat of 14' length (Whitehall type) using 2 lb. urethane foam core of ¾" thick, and covered with one layer vectra inside, and two layers vectra lapping over at keel giving four layers at keel and two layers on topsides. A flexible non-wax, polyester resin was used for laminating.

I am very impressed with the vectra but I think the core was nowhere near to the strength capabilities of the vectra and flex resin. The core fails in compression (buckling) way too soon, and the whole structure lacked stiffness. I would advise making-up fairly large test panels - break them up and compare them with equal weight per square area marine ply panel. I did this on a limited basis before making the 14' boat and found the sandwich marginally superior to ply as far as strength to weight.

The sandwich was chosen for the number of compound curves in the design, the ease of building this complex shape, the fact that the boat would be very buoyant even full of water and I wanted to experiment anyway.

I am building a 53' TEHINI and considered the sandwich route. I chose to use marine-grade ply because I felt that quality control on construction would be easier, also the Wharram hull has very little compound curve in it, and it is probably cheaper to build in wood. I bought the ply in bulk and sorted through lots of construction grade fir for clean,straight-grained pieces and then air dried it. I am however going to use 4.3 oz. Vectra and a very flexible polyester resin to sheath the hulls as I think this laminate has a very much better chance of maintaining a bond to a non-rigid material such as wood and across ply joints. Has anyone used vectra (polypropylene) cloth and a flex resin for sheathing their hulls ? I think a lot of experimenting is necessary to develop a sandwich which is right for a given job, but once developed the sandwich will, I think, prove superior to wood.

I have also played some with a single sail Junk-rig on a 4' TEHINI model. After trying the model with only the TEHINI main (500 sq.ft. to scale) and then with a big (1200 sq.ft.) single Chinese sail of high roach ? low aspect ratio, I came to a few tentative conclusions.

(1) Jim's TEHINI main with his mast size is an efficient configuration for this type of sail on this type of boat.

(2) The boat (model) at 16000 lbs.(scale) displacement, did not go faster than 12 kts. (scale) with either the 500 sq.ft. or the 1300 sq.ft. sail, leading me to believe that the chinese rig is not up to par with a good bermudan rig for efficiency and that loaded Polycats are restricted to monohull speeds of 1.7/wl.

(3) Jim's Junk "Ketch Rig" has got to be a wonderful cruising sail. I am going to use it.

(4) The model showed an uncanny ability to stay on its feet in very bad cross-chop conditions; with gusty wind, even occasionally being bodily blasted out of the water by wind and vaves, and every time it landed right side up after doing some wild gyrations. I think these boats are very able sea boats.

Further letter from Clay

"Before buying the "Tehini" plans, I constructed a 1" to 1' scale,working model of "Tehini" to check general characteristics of the boat. The model had a scale 750 sq. ft. single (una) Junk Sail, displaced 15,000 lbs. to scale and was steered by simple wind vane gear.

On a pond in very light airs the boat moved well but was poor to windward. On the sound one day with scale winds of 20-25 knots and scale seas of 7' to 10' the model was very close winded on one tack (45.deg. to true wind or less estimated)and made very good net speed into the wind. On the other tack (mast convex side of sale) the boat was not so close winded. On setting the vane gear and sail for reaching,the boat "went like a train" outrunning our rowboat until the shore ½ mile away stopped it. Estimated speed of model was scale speed of 12 - 15 knots. It appeared to be "in the groove", moving with easy motion, no fanfare and no fuss at about 12 knots - very good qualities for a cruising boat.

Let the air in

I have received numerous worried letters about the warning for the need to ventilate hulls, given in our last issue. Perhaps it is my fault but some of you seem to have got the wrong idea. It was not aimed at the possibility of rot or similar, as per Paul Garnham's article in this issue, (although it applies), we are concerned with the possibility of asphixiation in enclosed spaces. Imagine, you're working hard to fit the furniture in your cabin, or perhaps the finishing paintwork, feel like a rest for five minutes, just time to brew a cuppa on the primus you have already installed, hullo, it's raining, better shut the hatch, gosh feel sleepy. Need we say more ? DON'T PROCRASTINATE ---- VENTILATE NOW.

Editor.

A short account of TEHINI's sail to Milford Haven, from a letter by James Wharram

TEHINI was sailing by the middle of October, and we had a few light weather sails, finding that the boat could "ghost" extremely well. Our real heavy weather sailing came on November 30th. when we took a chance and sailed from Deganwy, hoping to get South and out of the Irish Sea before a forecasted force 7, from the West or North West sprang up. We lost the chance and during the night of December 1st we really took a hammering in the Irish Sea. The weather forecast to the North of us in Hebrides was Force 9 Northerly. Our forecast was 6 - 7 Westerly, so we had an underlying strong Northerly swell, with a Westerly sea on top. TEHINI certainly showed that catamarans do go to windward in heavy seas and winds. I thought, "It's now or never" and really drove TEHINI into the seas. She made 8 - 10 knots to windward, but round about dawn, the heavy trampoline webbing between the bows, pulled away the inner port bulwark, due to the weight of the water it caught and absorbed, and the netting beam between the bows cracked away from the bolt on the port bow.

We cut our losses and headed into Milford Haven.
In Milford Haven, we found the reason why the lee port bow was not lifting to the seas. The port bow cabin was not used for living in and $\frac{3}{4}$ ton of stores, sacks of vegetables, water tanks, etc., had been stowed in it. (It was my fault, for I should have checked). Apart from this weight preventing the port bow lifting, the structure of TEHINI suffered no strain, but what kind of strains would be transmitted on a rigidlybuilt catamaran under such seas, speeds and ill-loading ? Certainly the friend who was with me, a civil engineer, thinks that cracking in a rigidly built catamaran would have been inevitable

However, in spite of tacking back on one occasion North up the Irish Sea, seasick girls steering part of the time, and reducing sail after the inner bulwark pulled away, our average speed made good to windward over 27 hours was 6 knots. I am indeed very pleased for I had begun to think that perhaps the Junk Rig was just a clever idea of Chairman Mao's to confuse the English yachting scene !

The speeds of TEHINI and her windward ability, as far as I can see without actually rowing alongside, are as good as Major Farrant's "Trifle", as written up in the R.Y.A. Winter Magazine. However, it must be remembered that we did have 7 people on board, food and water for 5 people for 100 days, all their personal possessions, and belongings of a home, for TEHINI is a sailing home. Also, TEHINI's and "Trifle's" water-line lengths are not so widely different.

TIME TO BUILD ?

Anthony Barton, Egham, Surrey .
I am building a NARAI sail No. 29 the first hull is near completion. Comments on design and construction;. well I am not a shipwright and therefore think there should be more detail and instruction, and as far as time to complete the boat, I would take Jim's estimate and multiply by three, certainly for the larger boats.
Alan Brown is finishing off a TANGAROA just up the road from me and he reckons that it has taken him at least double the time Jim said.
Editor I have my own ideas on this subject of time taken to complete, but how about you ? Have you got any comments to make ? Theoretical or practical, let's have them for us all to discuss.

Anthony also wants to know more about Nico Boons;"Idea for a Motor" in particular how the thrust is taken with a lifting prop. He suggests it would be worth trying Eastern Motors Ltd., Aldeburgh, Suffolk for engines and other mechanical bits and pieces

Ply & Sheathing Cloth

P. Marsh, London reports:- V.Goldbergh & Sons, 8 City Road, E.C.1. sell very good plywood made by Syone of Israel.

Mahogany exterior WPB ½" 226s. 9d. per 100 sq. ft. 8 x 4 and 8 x 5 (Min. 10 sheets this thickness)

Also:- Marglass of Sherbourne, Dorset, will send a special type of sheathing cloth, which is treated for use with Epoxy paint, but it costs 10s. per roll.

HINA FOR SALE HINA No. 3. TOBY, completed 1969, Bermudan rig, Terylene sails, alloy spars, Thames Marine ply. Seagull Century outboard 4 h.p. included. £230 or near offer. Alan Stanier, Liskerret, Forden, Saltash, Cornwall. Tel: Saltash (STD.0755-5) 3674

ADVERTISEMENTS

We are always pleased to help fellow enthusiasts with the sale or purchase of Polycat boats and gear. 10s. per insert payable to PCA, through Pat Stewart please.

Editor

Letter. from Lee Rose, New South Wales, Australia.

I launched my HINA last June 1969 and apart from one spell at home, for anti-fouling, etc., during our winter (July) it has been at its moorings off Silver Beach at Kurnell. A few hundred yards along the beach is where the first known landing of white men was made on our East coast by Capt. Cook and the men from the ENDEAVOUR.

The mooring I made by filling a concrete pipe, 7" internal Dia. with scrap steel and concrete. One of my sons helped get it down to the water from my Microbus across about 30 yards of sand. Once there I slung it underneath my canoe and as it weighed about 260 lbs. the problem of dropping it was engaging my attention. The Maritime Service Board controls the moorings and anchorages in the state of N.S.W. Their local representative had allocated a mooring site about 200 yards offshore for CATALYST our HINA. I successfully dropped the mooring in about eight feet of water without taking the canoe with it.

Since the extension of an airport runway out into the bay two years ago, Botany Bay has undergone a tremendous amount of damage and erosion to its foreshores. Dredging work done for the runway has resulted in large waves pounding the bay. During a S.E. gale in 1968 waves of 19' were recorded at Brighton within the bay. Even where my mooring is waves of about 5' were almost breaking as CATALYST rose to them, in early July 1969, whilst large waves from a S.E. gale were entering the bay. Sailing directions warn that "Sudden changes may be expected at all times of the year" and "rather rough conditions may be raised by strong winds from any quarter"

The sails are Bermudan and I made an internal track mast 24' high and a boom 12' long to take the main and rigged the forestay to the "hounds" about 18' from the bottom of the mast. I left the maststep where Jim had it for the spritsail rig and used midbeam sheeting for the boom bringing the sheets to the rear cross-beams. The area of the sails are 50 sq. ft. jib and 140 sq.ft. for the main. The jib is too full but the main sets well and is fully battened.

A local representative of Polynesian Cats had the editor of SEACRAFT (a yachting magazine) go out on Pettwater north of Sydney for a sail on a HINA which was imported here from Ceylon some 18 months ago. The editor was unimpressed and the article was headed "TAMECAT".

Shortly afterwards I entered what was to be a race around the bay (Botany Bay) in which quite a few classes were to race.. These included Tornados, B cats and Quickcats and other cat types and V.J. scratch boats, Corsairs and various keelboats up to 25'. As I was completely inexperienced racing and did not know the potential of the boat I kept well to the rear at the starting line letting all the other boats cross the line in front of me. Due to my inexperience I pointed our boat as high as the others and because I was amongst the tailenders I was doing as well as they were to windward. The first mark was right up the far end of the bay dead to windward. The course ultimately worked out as a dead beat with two shy runs returning down bay past the original start by a mile or so and a beat and a short reach to the finish.

We took one hour 50 mins. to do the round trip, the winning boat, a TORNADO taking just 55 mins. To my shame we were beaten in the finish by a keel boat which had gained a great start on us and was a tremendous distance e ahead at the first windward mark. We passed boat after boat on the last reach leaving behind a series of planing dinghies with spinnakers set as the wind had freshened to a steady 20-25 m.p.h. However we still didn't catch the keelboat, it just beat us over the line. Since then I have stitched short lengths of terylene on the luff of the jib and I tie these around the forestay. The jib functions much better to windward now. Also I find that if I bear away and get the boat really going I can then ease her up to windward and maintain her speed. Out sailing on my own recently I tried conclusions to windward with the same boat and although she again beat me to windward it was a contest this time and, if I had had a load on, I might have beaten her. I find that a short, steep chop such as we get on the bay in anything above force 4, tends to check my boat and make her hobby-horse.

My eldest son recently took out eight other young adults sailing on the bay. He said that despite being loaded beyond the recommended limits she behaved very well, going about with a great deal of drive to windward and losing

very little ground to leeward when beating. I too have found that performance improved with the load.

On the only trip outside the bay we carried a dinghy on deck and my eldest son and I sailed with only the bare essentials in the way of equipment (flares, anchor, warps, water beaker, charts and compass.

We dropped the mooring at 10.30 a.m. on a Sat. and with a 10 knot S.E.wind beat out to the bay entrance from where our course became a reach and then a square run for about 6 nautical miles to the entrance to Port Hacking, south of Botany Bay, which we entered and sailed to the northern end of Gunnarmantla Bay dropping anchor there before 12.30 p.m.

The direct distance was 10½ n.m. but we sailed about 14. Once outside Botany Bay heads and running south we had found the wind 15, gusting to 20 kts. After picking up the others in the family we sailed around Port Hacking for the rest of the day.

A little after 9 a.m. on the Sunday we sailed south down Gunnermantla Bay and then beat out of Port Hacking. The sea was lumpy about 5'0" waves with some steeper caused by a surface swell which seemed to come in with the wind from N.N.E. over an E.N.E. swell. The wind was increasing and we found that our CATALYST was sometimes rearing like a horse over the seas and now and again burying her bows into the oncoming walls of water,although not very big seas. The wind continued to freshen and drew more into the north. The coast hereabouts tends NNE as Bate Bay has a large projecting reef extending almost a mile from its northern end.

Beyond that sandstone cliffs reach away generally NE then North for the next few miles until the entrance to Botany Bay. We made ten tacks in all before entering the Botany Bay heads in a falling wind. At times the wind got as high as force six but the seas were about force five in appearance during our beat NNE. On our seaward tacks, of a couple of miles or so, we found ourselves meeting the seas, with occasional breaking crests,head on. Once we buried both bows when we fell down the back of a big one and rushed into the oncoming breaking sea. We were momentarily deluged by pouring "solid" water over us and were both thrown in the air by the force of the bows leaping out of the wave. On the other tack we sailed with the seas much more on our beam (starboard). Never at any time did I feel she was lifting a hull even though we were rising over some fairly steep short seas. Just as we entered the heads the wind fell away and we found a little difficulty in edging in around Inscription Point

Then, quietly a SW breeze came and we found ourselves with a beat to our mooring. We had stowed and shipped the sails, in the now launched dinghy, tidied up, rowed ashore and rung for transport by 12.40 p.m. so our sail back had been in good time.

I felt it has been a most satisfactory performance from the boat in every way.

There were a couple of inches of water in each hull, my hatches aren't as watertight as they should be, but this did not hamper performance. I hope to make more outside trips but as gales have already started early this winter I will wait for the beginning of our spring.

A HINA in the Thames Estuary D & B. Palmer.

We have just had two weeks hectic holiday in our boat. She is a HINA, Sprit rigged but with two small cabins instead of hatches. I am now trying a modified idea of Ruth Wharrams to give a lifting cabin top approx. 6' x 5' over the centre decking, the problem being to make it light enough without being flimsy.

We launched at Blackwell Point, a revolting stretch of the Thames, just past Greenwich, and our white topsides are now a rather nasty shade of grey from the thick oil and muck that lurks in that part of the river.

Our fastest speed so far, is an estimated nine knots, which we achieved on a broad reach just past Erith. We also managed to run aground on the Chapman sands in a force four, so we are quite confident in the strength of Polycats. We are a bit disappointed with the windward performance of our cat and would welcome suggestions for improving this, she also seems to carry a fair bit of weather helm, but that is not so terrible.

Just to round off, the name of our boat is HUKA TAI which is Maori and means, Seaspray, and the builders are ... Don & Brenda Palmer.

Don earlier in the year reported difficulties with obtaining sails from Jeckells, however he appears to be fixed up now. Editor.

MAUI with cabin and footwell Roy Rose

Roy Rose from Hall Green, Birmingham, reports that he has finished his MAUI MISS. "I have put a small cabin and dropwell" writes Roy. "I know Jim would go mad at this, but I need somewhere to keep all the gear; I'll let you know, next year, how well she sails, or how quickly she sinks"

Roy continues that if after successful trials, this spring at Portmadoc, he will consider building an ORO. He also promises photos of MAUI MISS. (those I should like to see. Editor)

Standard Boats

Just reading all your enthusiastic letters makes me wonder if anybody has ever built a "Standard" Polycat, that is, sticking rigidly to the plans ? I wonder what it is that makes all of us, as soon as we get the plans, want to start "improving" them ? If you have any ideas, write me, let yourself go and make it as controversial an article as you like. Editor.

Once you have your Cat, preserve it ! Paul Garnham

No Cyril, not in formalin. The warning in the last Sailorman about ventilation in complete and part complete hulls is extremely timely. The alternative warm and wet weather which we seem to be enjoying just now provides the ideal environment for fungi and rot. I know I took a careful look inside all compartments of my hulls the same day that Sailorman arrived. But the threats to our craft are manifold even before the grand launching. Fire, fungi, delamination, worm, abrasion and electrolytic action must all be resisted from the moment that the timber merchant hands you the delivery note. I've just looked my dwindling timber pile over for the last time I hope, to check for fungi,splitting, and as usual to see whether I shall be ringing the timber merchant for more fodder for the Spear and Jackson.

Readers may recall our abortive attempt to sheath hulls with parachute nylon, and as I'm rather sensitive about preserving what I've created I felt that a kind of catalogue of possible disasters might constitute a useful, if not popular, article. In the beginning there is the pile of Douglas Fir. I stored mine in the open under polythene sheets, and raised from the ground on sleepers. One year in this situation has had remarkably little effect on the timber. I found however, that the larger sizes and wide boards need more paint on the end grain to resist splitting. The original paint is not really adequate. Ply is best stored flat (and level) under cover.

I live on the East coast of Scotland,allegedly one of the driest areas in Britain. How Jim and other builders have constructed their craft in the open on the West coast I shall never know. To protect the hull under construction I originally constructed a "thing" of heavy gauge polythene and scrap timber. A mere Force 4 swept it aside and the skeleton was regularly soaked. Eventually I had a local tent maker run up a piece of flax canvas (proofed) 43 ft. by 9 ft. With eyelets every few feet this sheet,secured to the hull had been a blessing and will eventually be converted to other purposes (awnings, storm sail, dinghy cover, etc.,) Before I had often bailed 10 gallons out of a hull after annight's rain, envying Nigel Harford and Co. who were at that time building in the comfort of a barn.

There are really three aspects of this preservation business to be considered: choosing the most durable materials consistent with economy, protecting those materials from the worst that might be expected, and then by avoiding, as best as one can, an unfavourable environment. Perhaps the Editor will allow me to deal with the first of these items here, the remainder to follow in the next issue.

First, materials, and timber in particular. The ability of natural timber to resist decay varies enormously. The Timber Research and Development

.Association have rated timber for durability and of course the timbers used in marine ply rate well, with Makore the only timber classed as very durable (over 20 yrs.) Such timber may be used for the outer veneers of ply with some unspecified "mahogany type" wood for inner veneers. The durability of the timber is not the only consideration, for if the construction is not sound, it matters not what the material is. Makore, for example because of its hardness is prone to surface checking. British Standard 1088 should protect us in respect of manufacture, but quality varies enormously. Do complain loudly to the makers if you discover departures from BS.1088. I recently discovered an inner veneer gap of ¾" Max. width extending across a whole sheet. This is really unforgiveable in material upon which life must depend when afloat.
Exterior grade Douglas Fir ply is used by many builders, but it does need much more careful protection, in view of its lower durability. Known also as Columbian Pine, or Oregon Pine, this timber is, however the natural choice for general construction as it is relatively free from knots and is obtainable in lengths up to 24 ft. (occasionally 27 ft.) and in the desired widths.

I have found a use for some hardwood in Tawhiri, and would like to see more but £££££ ! Odd pieces of Meranti, Keruing, Utile and Mahogany are useful for resting blocks, tabernacles, cleats, grab handles and so on. The durability of these woods is generally good, only the interlocked grain is a curse when planing.

Fastenings are another matter where economy must be argued aginst durability, resistance to electrolytic action and strength, and the choice generally falls between, barbed ring nails, galvanised nails, or screws of any material. Some folk I know regard fastenings as merely a convenient way of holding wood together while the glue goes off, but I'm a belt and braces man in this respect. Now that I've driven home about 85 gross of phosphor bronze barbed nails, I'm glad that I didn't use screws very often. These nails should not suffer electrolytic attack since the material is high on the galvanic table. Perhaps some builders who have used galvanised nails will tell us if there are any problems there. On the face of it, I felt that hammering would remove the galvanising of the heads and open sesame to rust. In any event dissimilar metals below water should be avoided, and even dissimilar metals in contact above water. I shall be eyeing my pintles very carefully for signs of a disappearing act at the hands of the bronze nails.

There are some other unfavourable mixes which ought to be mentioned. Terylene is attacked by zinc, hence the luff wire of jib and mizzen staysail should be parcelled with p.v.c. tape, or alternatively the plastic

covered flexible wire can be used. Also if terylene is used for lanyards, the thimbles and shackles with which it is in contact should also be parcelled with p.v.c. insulating tape (the new fangled kind)...

Glue is, of course, the miracle material that makes it all possible for us. Broadly speaking most of us will choose the cheapest Urea Formaldehyde (that's Aerolite 306) may rise to Resorcinol (Aerodux 500), or if millionaires, Araldite, (epoxy).

An article to cheer us all up appeared recently in Practical Boat Owner, suggesting that if our craft was used to spend most of its time afloat we had better use resorcinol glue. Is my ship, and thousands like it to fall apart because it is glued with Aerolite 306 ? This is what that article seems to imply. I feel reassured, however, by the fact that many war time air-sea rescue and torpedo boats were constructed with Aerolite, and many were in active service for ten years and more. Gliders and the old Mosquito were also glued with Aerolite. Whilst they were not actually afloat, they withstood severe strains in all weathers and for many years. There are always better glues of course, Araldite will glue steel as we all know. I merely want to glue wood, so will stick (sorry) to Aerolite.

Next time, the protection racket, or bathing in Cuprinol.

STICKING HIS NECK OUT — Bev Underwood, Cheshire.

Having been an avid reader of the "Sailorman" since it's appearance I feel, on reading the exhortations of our new Editor, that I ought to put pen to paper and "give"

So far I have not joined the ranks of Polycat members physically, only mentally; but will do within the year. I have at the moment a "Tub" and although well down the scale in sailing ability, I have studied the story of small boats and sailing for some years.

Where in the development story of the small vessel can we place the Polycat ? All small boats have ancestors.. Take the "sewn" construction of the Mirror dinghy; this method of construction was well known to the cave man, who began all this clinker business by sewing an extra strake each side of his dugout canoe. The pram dinghy by the way, is a relation of the curragh or skinbboat of Ireland, which in turn begat the cobble. Polynesia showed the way with the twin joined hull because there was little timber available to build anything else;. catamaran we understand comes from "Catu Maran" meaning, Tied logs, an Indian word, as is dinghy.

Where does Jim's cat come from ? I am of course, open to correction here, but having read most of Jim's writings in search of the clue, I have come

to the conclusion that they are a clever combination of Polynesian and Scandinavian ideas.

I gazed at Tehini, building in Deganwy, until my wife nearly left me - in fact she claims I ruined our last holiday in Conway - when suddenly I saw it ! What ? well the relationship of course. Take one hull and look carefully at it, there without doubt (I hope) is the Nydam boat, straight from Scandinavia, the direct ancestor of the Viking long boat built heaven knows how many years B.C. It's nearest relation in England is the great galley of Sutton Hoo, found in 1939. Our Saxon ancestors rowed here - the Saxon galley was not suitable for sailing (the keel had not yet been invented).

But Jim, if he will forgive my presumption, has done what the English have been famous for down the centuries, that is, he has improved upon someone else's basic idea.. The English are not originators, they are developers and improvers.

The general run of "yacht" catamarans do not inspire much enthusiasm in the eyes of those possible mono converts who want a boat to look like a boat, - slab sided and ugly, with reverse sheers that can only appeal to the "functional" mind. Polycats "speak" to people who can see what aesthetic beauty in boats should be a not too exaggerated unbroken sheer swings from end to end of the graceful slender hulls. The builders of Nydam would have swooned for joy !

Polynesia provided the stability idea but, I feel, little else. The beauty is Anglo Saxon, which is in turn Scandinavian in origin. We can do little to escape from our heritage, and our heritage is beautiful, beautiful boats. Just as the Roman sailing master would feel quite at home with a huge square sail jammed on a modern MFV because it is virtually the same boat - .. so the builders of the long Saxon galley and the Viking long serpent would feel at home with Jim's creation.

Perhaps I have gone on a bit, I know crackpots like me arise from time to time to claim all sorts of weird things, but, who knows, historians may take some notice. T.C.Lethbridge has traced development, but finished his book before Polycats got really started. Professor J.Hornel (Water Transport) knew the way, but was too early to see what was coming. E.K.Chatterton blamed everything on the Dutch, who's development in the small boat field was tremendous, but does not account for everything what heppened in England.

You cannot go and look at Tehini poised on the end of Deganwy railway pier now, but last time I was there (May '70) the little Hina was still there. The enthusiast may go and see her relationship to "Nydam".

Next time I will "go on a bit" about sails.

OBITUARY

Polynesian Catamarans is an extended family and the loss of one of us is a matter of pain to all. Recently, we lost Tom Browne, builder of the first HINA (SEAWITCH), and who readers of "The Sailorman" will remember for his fine article, (in the Spring 1969 edition), describing his crossing of the Irish Sea aboard SEAWITCH. Tom Browne died aboard his beloved "Ariki" which he was building to run with his proposed sailing school in Northern Ireland. He leaves behind him, his wife, Jan Browne, and children, whose address is - Woburn Farm, Ballywalter Rd. Millisle, Co.Down, N.Ireland., where all Polynesian Catamaran owners can still be assured of a good welcome.
Tom Browne wanted his children to be brought up in the ways of the sea and sailing. We on board the TEHINI will do our best to help, but it would be nice if, any other Polynesian Catamaran owners who are in a position to take the children sailing, or to help them in any way,would do so.

NYLON SHEATHING

Phillip G.Sheafe.

Reading Paul Granham's article in the December 1969 issue of the "Sailorman" I was rather saddened by the difficulties he encountered whilst sheathing his "Oro" Polynesian Catamaran with nylon. I have been engaged for some time in the construction of a Yachting Monthly 26 ft. "Eventide" (I am sorry in a way it's not a Wharram Catamaran,but when I started we hadn't been introduced) dispensing with the usual method of planking a hull with Marine plywood. I reckoned that if Lifeboats were constructed in double diagonal planking then this was good enough for me. Solid timber, short lengths, easily handled, and both layers glued together with Aerodux 500 glue. It makes a fine strong hull. More of this method if anyone is interested.

A time came when the hull was planked up and the question of sheathing loomed on the horizon. My reasoning for using nylon was the same as Paul Granham's. However, I located a cheap source, and used continuous lengths of 54" wide nylon and glued it to the hull with Aerodux glue. The method used was as follows: A sufficient length was cut off the roll (in my case 10 yards) to cover one side of the topside planking. The nylon was laid out on the topside of the hull, and of course, the hull was upside down at this stage. The two ends were rolled towards the middle and held in place by using big paper clips and 1" Panel Pins to hang the clips on. See Fig.1. Next, some 1" wide battens cut from 3/16" plywood about 4' long were brought into use. (I suppose strips of hardboard might be used as a substitute for the plywood, I did try laths but these split, and seemed useless for the purpose.

Taking one of these battens I nailed it vertically to the hull on top of the nylon between the rolls, using 1" Panel Pins, spaced about 2½" apart and leaving the heads ¼" proud so that they could be withdrawn by a claw hammer later on. One roll was then unhooked and laid over the top of the other one and re-hooked. Aerodux 500 was applied to where the roll "A" (see Fig. 2A) had been. This was brushed well into the planking not too thick and yet not sparingly.

Roll "A" was then re-hooked onto its original position and a 4" x 4" piece of hardboard with the edges nicely sanded, was used to push the glue along the planking under the nylon. Fig. 3 & 4. There is no finer tool than this piece of hardboard for the job. Fibre glass rollers are useless, as air gets in between the washers, cloths and sponges are too soft and you can't "feel what's going on". The secret is to "chivvy" the glue along under the nylon and remove all air and bubbles, but at the same time not to get glue starvation as a result of too much "chivvying". Having satisfied oneself that there is no air trapped, (not forgetting to work up to, and from, the batten nailed on previously) and that there are no glue runs or ripples under the cloth, take another batten and nail it about a foot from the first and parallel to it, then cut battens to fit horizontally between the two vertical ones at the top and bottom, and one or two in the middle for good measure (contd. below)

MATERIALS REQUIRED:

Nylon cloth
Recorcinal-Phenol-Formaldetype glue (5 lb. mixed glue per 100 sq. ft. approx.)
International Interpad Filler or
Bondapaste
International Epoxide paint (¼ gal. cover 60 to 80 sq. ft. approx. first coat less last coat more)
International 708 Two Can Polyurethane (Coverage as Epoxide)
Antifouling as required
Epoxide Thinners
Epoxide Brushwash
Polyurethane Special Thinner and Brushwash

Unroll about another yard of roll "A" and hook over the battened portion putting in more nails for the loops of the paper clip to hang on, and repeat the process until you reach the end of the hull. You will find that the nylon will nicely go round double curvatures and stem and stern posts. Having done about six feet or so of roll "A" put a batten right beside the first one on that side of it where the glue has been applied. The "first" batten must then be carefully removed by withdrawing the nails and the glue that had seeped under it spread in the direction of roll "B" so as not to leave a line of hard glue in that area. The batten must be re-applied some two or three inches away. Repeat for roll "B" and remove battens when the glue is cured.

Battens can be re-used but need sanding underneath so that they are smooth for applying to the nylon

It is possibly relevant to mention at this point that the glue does not come through the nylon to the surface, only about half the thickness of the material is penetrated. Later, the first thinned down coat of Epoxide paint goes right into the outside of the cloth to meet the glue halfway.

Where one layer of nylon overlaps the other, say at the stem, stern, and where the final keel layer on the deeper hulls overlaps the side layers. A batten must be nailed to the edges, see Fig.6. A very good finish can be obtained at these overlaps by knifing with a putty knife a two inch wide spread of either International Epoxy filler, Interpad or Bondapaste. (see Fig.7.)
If time is not critical I Prefer Interpad, as it seems to be runnier, but requires 24 hours to harden. Bondapaste however makes a first class job and cures in about 30 mins. When cured these fillers can be sanded down to a good finish. It is better to do this filling business after application of the first coat of thinned Epoxy paint.

When painting I used International Epoxide paint using a different colour for each coat so that no "holidays" occurred.
Three or four coats of Epoxide were brushed on, each one lightly sanded down with wet and dry. Under the water line Hard Racing Anti-fouling was applied, but above the water line a final coat of Two Can Polyurethane Paint was used. The reason for this is that Epoxide paint is alleged to "chalk out" and lose its gloss. On the decks this is admirable and as it should be, but on the topsides a gloss finish is preferable. Moreover there is a greater range of colours from which to chose. In the Two Can Polyurethanes it must also be added that before sheathing commences all screw and/or nail holes must be filled with Interpad or Bondapaste and the whole of the hull must be sanded. (contd. on next page).

TOOLS REQUIRED FOR SHEATHING

Claw Hammer

1" Panel Pins (say ½ lb)

Small Tenon Saw (for cutting battens)

Sandpaper

4" x 4" x ⅛" hardboard scraper

2" glue brush (This can best be washed out after use under a COLD water tap, not hot)

½ doz. 2" oval nails

Large "Bulldog" paper clips (8 to 12 required)

Putty Knife

Sharp folding seaman's knife

Felt Pen

Scissors

Epoxy paint brush

Soft brush

When one or two coats of Epoxide Paint have been applied, then is the time to be cunning. Obtain a small floor brush. Brush fairly softly and lightly over the nylon and listen. What's that ? You can hear a change of note as the bristles move over the nylon in one-place ? Well, that's probably an air bubble. Confirm the brush findings by lightly tapping the suspected area with the top of the fore finger. If it's hollow then mark the area with a felt pen.

Not to worry though. You can fix it in one of two ways. If it is a small area no bigger than a half crown or the centre of a saucer, then obtain a 2" oval nail. (This is again the best tool, and like your hardboard "chivvyer" not to be bettered). Proceed with the claw hammer to tap the nail into the marked area. Work from the middle to the outside piercing the nylon and planking to a depth of from $\frac{1}{4}$" to $\frac{3}{8}$" and approx. $\frac{3}{8}$" apart. Usually if you can just pull the nail out with the fingers, then it has gone far enough. Work over the area until you hear the nail going into the area of nylon that is soundly glued to the hull. When you are next painting get your fore finger dipped in the Epoxide Paint and work the paint into the bubble using a circular motion. (Bubble is probably the wrong word because it doesn't stick out from the hull but for the purposes of explanation I will use this word). Work more paint in until air ceases to come out and only paint oozes from the nail holed in little squirts. Take a piece of polythene sheeting a shade larger than the "bubble" and nail this down with short lengths of batten, remove after twelve hours if the weather is warm, but leave longer if it's colder. Sand and fill nail holes with filler and nobody would ever know you had a sheathing fault.

If the hollow area is bigger than that just described or if the first method doesn't succed then try thus. Mark the area with the felt pen into a rectangular or square. Place masking tape on to the marked lines and press down firmly. Take a straight edge and cut down the centre of masking tapes with a very sharp knife. (Razor blades bend too much under pressure Carefully remove nylon from the area and clean off glue and then sand the wood. Next mark out and cut a new piece of nylon with a pair of sharp scissors to fit exactly into the area from which the faulty piece was removed. Now apply more glue, cover the job with polythene sheet and well batten down. Particularly over the edges of the joint.

When the glue is cured remove the battens and fill nail holes and joints as described above and sand. It cannot be too strongly emphasised that when sheathing a hull with this method, the glue must be used in a temperature not below 55 deg. F. a higher temperature is preferable but

you are just wasting time, money and effort to use a temperature lower than this.

In my opinion while it pays to shop around and buy the cheapest that you can, it is not worth spoiling the ship for a "halfpenny of tar", normally one gets what one pays for. So don't buy too cheaply or you may be getting trouble.

I was rather surprised however to note that Paul Garnham went to the trouble of removing all the glue from his hull. This seems to me to be a waste of time and I think it would have been better if he had just sanded the glue down to a thin veneer of glue and then painted over the top of this. After all he won't get a better bond than glue to wood.

THIS WEEKS GOOD CAUSE

You will have read in the front of this issue how close we came to not having a SAILORMAN at all, this time. Now you cannot tell me that you have nothing to contribute, towards SAILORMAN. Everybody has something to say, a story to tell or even criticism to offer.

Your trouble, I suspect, is a certain shyness to put anything on paper. Things that you may wax quite strong about, over a glass of beer with your fellow enthusiasts, probably don't seem quite the same with a pen in your hand. Well please try, and try again, harder.

I know, and I bet you know, that at this time of year, when everything seems grey and the sea and its freedoms are a million miles away, SAILORMAN is like a breath of spring air to flagging enthusiasms.

Therefore, if you gain strength and sustenance from our columns, and I hope you do, help us to help others, by offering your personal story, your own ideas, or even a verbal kick in the pants if you think we need it.

This may sound like a desperate cry for help .....it is.

Thanks

Thanks to all our contributors past and present. I think, and from comments we have received, so do others, that we are on the right track with SAILORMAN and provided we receive the support we require, we will continue to fill a need in the interests of PCA members.

EDITOR

NYLON SHEATHING

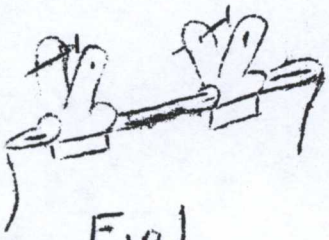


Fig 1

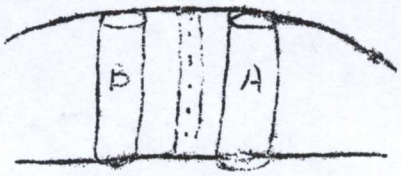


Fig 2.

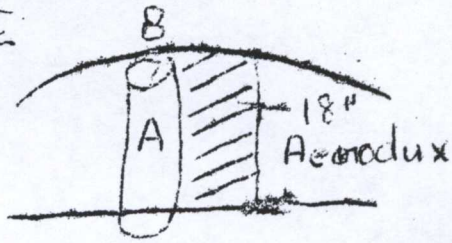


Fig 2 a

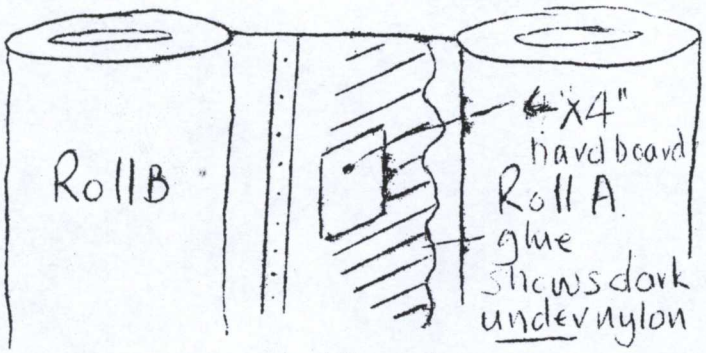
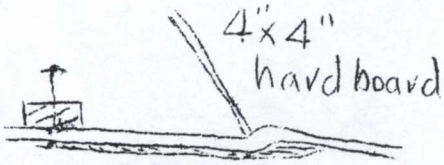
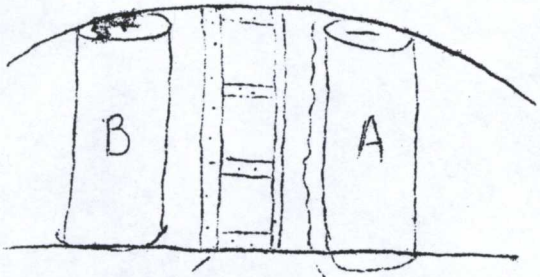


Fig 3



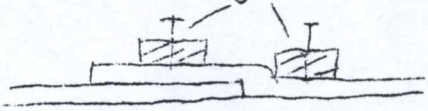
excess glue & air bubble 'forced' along under nylon.

Fig 4.



1"x3/16 battens glueline

Fig 5



one layer overlap

Fig 6.

Fig 7

ANNUAL GENERAL MEETING

POLYNESIAN CATAMARAN ASSOCIATION

RICHMOND COMMUNITY CENTRE (AS LAST YEAR)

SAT. 16th JAN. 1971 7-0 – 10-30 P.M.

Two minutes walk from Richmond railway station

SEE YOU THERE.