

Shelton

The Sailorman

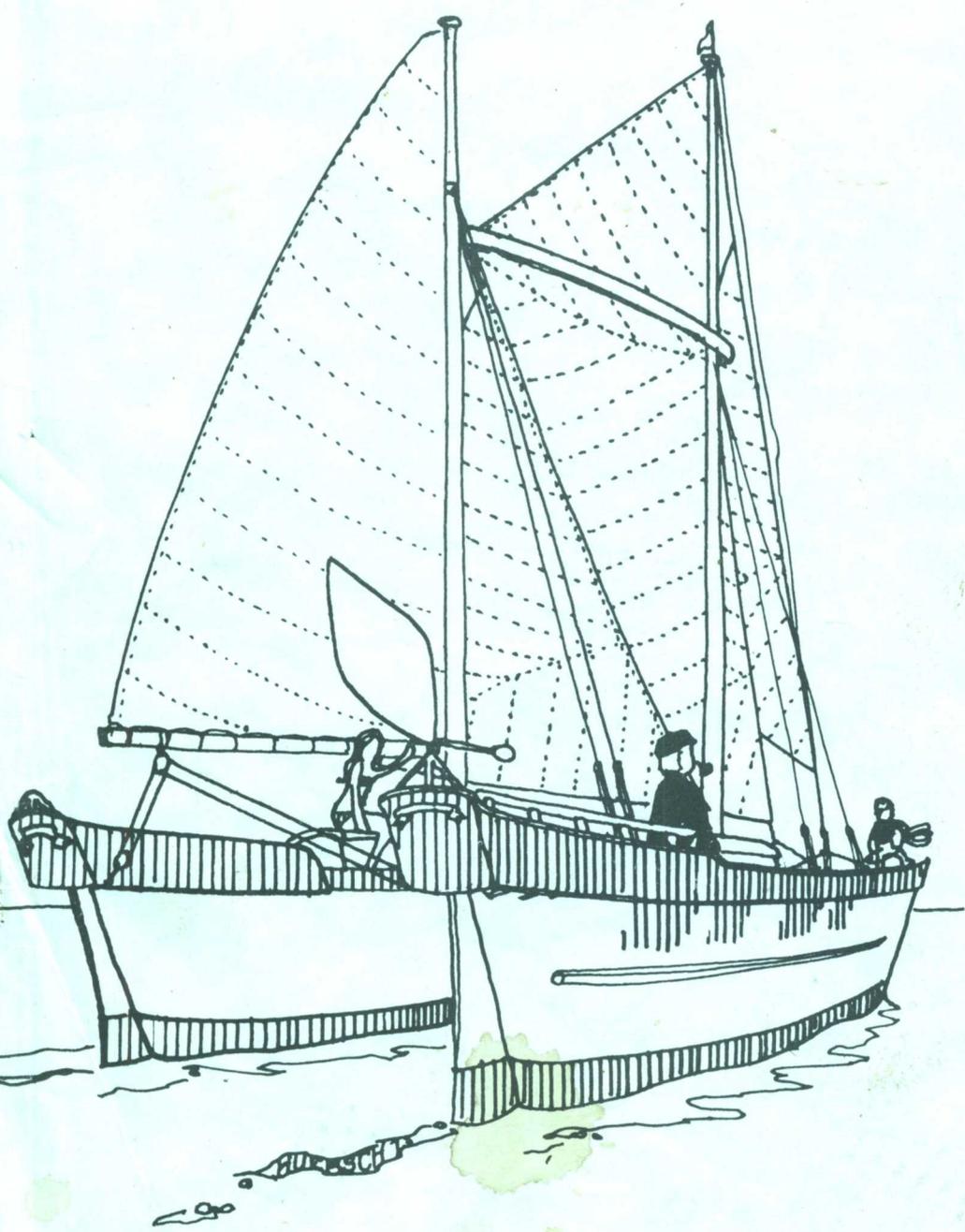
A periodical Journal published by *The Polynesian Catamaran Association*

#14

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EDITORIAL

The A.G.M. in early January was crowded once again and some very lively and blunt speaking took place. Joan has relinquished the Hon. Treasurership after two years. We all owe her a debt of gratitude (not to mention the £12 excess in the bank!) for the hard work she has put in getting us all to pay up and in answering the many varied questions you have put to her. She will now be able to concentrate on helping me with "The Sailorman". The names of the new Committee are given below.

The lively debate at the A.G.M. made it clear that most members saw the Polynesian Catamaran Association as primarily performing a communications function. Individually all builders would have to make the same mistakes and try the same solutions. By joining together everyone's experiences and answers to problems can be shared, and by this means much work and uncertainty can be avoided. In this issue you will all know what works, as far as engine installations are concerned. For instance, do not mount outboards on the last beam on the larger designs.

In the next edition, due out in early December (please note we have dropped the Spring/Winter description in deference to our members living below the Tropic of Cancer, who either do not have a Spring or Winter or have Autumn when we have Spring etc)

We have some more interesting articles lined up. One will be a description of what the R.Y.A. has to offer individual members (are you listening Peter?). I also want to hear about the rigs and rigging of boats which have been sailed this year. Does your boat tack easily with its existing rig? Have you tried something different and with what result?

Have you made any changes to the standing and running rigging? What about positioning of sheet leads and winches (measurements please).

"Tehini" and crew were last heard leaving Antigua, and are expected to be making their way back to Milford Haven now, arriving in May.

Work load for articles in this issue has been extremely heavy, and it was difficult to decide how to get everything in. Naturally, I am very pleased that members are now writing in and hope you will all keep up the good work.

David Lewis Editor



| | |
|-------------------|---|
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ASSOCIATION NEWS

Summer Meeting 1974 will again be down on the "Isle of Slingers" PORTLAND -

9th, 10th, 11th August 1974

We again have the use of R.N.Sailing Club facilities at H.M.S. Osprey, which means we can run the bar, use of the lounge, toilet and shower facilities. A programme will be arranged and details posted on the Sailing Club Notice Board. Saturday 10th August is set aside for the Barbecue night. Beer available from the bar, but bring your own food. Anyone musically inclined will be welcome to bring instruments to play.

A slide projector will be available should members wish to bring their own film slides for show. Anyone prepared to form discussion groups or give short talks on specific subjects, such as rigging, engines, seamanship, are invited to contact the Sailing Secretary, George Payne, or the Secretary, Peter Davey.

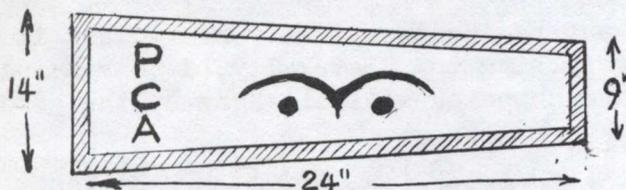
VOLUNTEERS to help each evening at the bar are required. We are hoping for a good attendance of boats at the meeting so that members will have both the opportunity to examine and sail in them, owners and weather permitting.

Last year we were able to suggest Caravan sites at Gloucester Caravan Park, 4½ miles from Portland. Bagwell Farm, 6 miles from Portland, write to Mr. Texton Bagwell Farm, Chickrell, Weymouth to make bookings. Tent Sites available at West Fleet Farm, Fleet Weymouth, write to Mr. Ballam and make bookings as soon as possible. Also Bagwell Farm (address as for caravan site). Bed and Breakfast lodgings - places can be chosen from Weymouth Guides (write to Conference, Entertainments and Publicity Dept, 6 Pulteney Bridge, Weymouth Dorset.

It would be rather polite to send confirmation of attending the Summer Meeting to George Payne your friendly Sailing Secretary, Tythe Barn House, Combe Martin N. Devon.

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HINA owner Harry Crossley of 22 Pierce Street, Oldham Lancashire, England would like to renew correspondence with Graham Cox in Australia. Harry has been busy making a P.C.A. burgee this winter (there is as yet no standard burgee)



Symbol and Border are black
Lettering is in Red.

Gerard Fitzpatrick of 266 Sutton Park, Sutton Co Dublin Ireland, has fitted low aspect ratio keels (3" deep 10' long) to his ORO cutter rigged bermudan ketch, would like to know if anyone else has used this rig or fitted keels.....

PENPAL SCHEME

Overseas Members Have you felt out of things? Unable to fully enter into the spirit of PCA? Perhaps a pen-pal in Britain would solve the problem of your isolation. If you feel you would like to write to someone in this country, to exchange ideas and information, please write to Peter Green 5 Valmont Road, Sherwood, Nottingham. But the Editor adds, don't forget the use of "The Sailor" which is also a means of passing on ideas, information, problems and solution to all members

U.K. Members For a long time now it has been regretted that overseas members have had little contact with other members. Naturally their being widely scattered has made this a difficult problem to deal with. Would you be willing,

ASSOCIATION NEWS

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therefore, to have a pen-pal abroad - just one overseas member?. After all, you may at least get tales of the sun we are all hankering to see! If interested, please contact Peter Green, 5 Valmont Road, Sherwood, Nottingham, Telephone 61359 (after 6.30pm) and let him know what sort of boat you are interested in.

YOU MAY NEED A CREW IN A HURRY !

Peter Davey, Secretary, reports that the list of members wishing to act as crew is slowly growing. However, the corresponding list of owners needing crew has yet to get off the ground. The moral here seems "Build your Own", but in the meantime would existing boatowners who may from time to time need a crew, please drop a line to Peter Davey well in advance of your likely need (give your telephone number) crews should also give telephone number if they have one, because of last minute demand for crews).....

BACK ISSUES OF 'THE SAILORMAN'

P. Lupi, a new member from c/o S.M.T.F. B.P. 2248 Lubumbashi, Shaba, Rep of Zaire would like to hear from any member willing to sell him back copies.

WANTED ! David Walker of 11 St. Nicholas Close, Copmanthorpe, York, would like MAUI 16 ft hulls either part built or kit acceptable, can collect Phone York 65447 Also loan of larger Wharram Cat for participation in 1976 Single Handed trans-atlantic Race. Sponsorship not sought, but neither is charter. Will fit out personally to required specification. Also interested in crewing on Wharram Cat in 1974 Round Britain Race.....

Bruno Panas is building a Tangaroa near St. Malo Brittany, France. It will be bermudan rigged and he would like to hear from anyone who has made their own sails also from any French Polycat builders or owners. His address is 82 Rue de Grand Faubourg 28000 Chartes, France.

Robin White of Outward Bound Girls School, Rhowniar, Tywyn, Merioneth, Wales is looking for a part-built Tangaroa, or larger boat. Anyone who is able to help please write him.

Gus Wisoky of Hobart Tasmania, makes a good point, "The only thing which worries me, is the number of people, who change the original design! One wants a double bunk in each hull, another lifts the deck by 4" or even 9" yet the designer put into the TANE twelve years of experience and although being himself 6' 3" tall he considers Tane big enough for cruising. Well?" Gus also suggests we mark the two half yearly journals by the months of issue, instead of Winter and Spring. A good point, we forget in our snug world of Britain that Australia is upside down..... Editor has therefore marked the Spring 1974 issue "April 1974" Thanks Gus, for bringing us back to earth.

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We received a copy of a marvellous article on Polycats from Paul Thompson, printed in the 'Pacific Yachting'. This is available for members to read also we hope to receive a copy of the magazine for library copy. He mentions Tom and Don Hembroff's Oro, Harold and Wendy Goddards Oro, Eric Smith's Narai, Reg Wilson's Tane. An altogether excellent piece of writing and we hope he got well paid for it.....

Would all area Secretaries let Editor of 'The Sailorman' have a written report however short of activities within their respective areas to print up for the Winter, December 1974 journal.

Thanks,

ASSOCIATION NEWS contd.

FINANCES

Retiring Hon. Treasurer could not balance the books this year! It appears there is £12 more in the bank than there need be. Hon. Treasurer can only humbly apologise and hope no one is going to sue..... On taking over the job in January 1972 there was £46 in the kitty and from 165 members, we gradually worked this number up to over 400 members at the close of 1973, by badgering and threats.

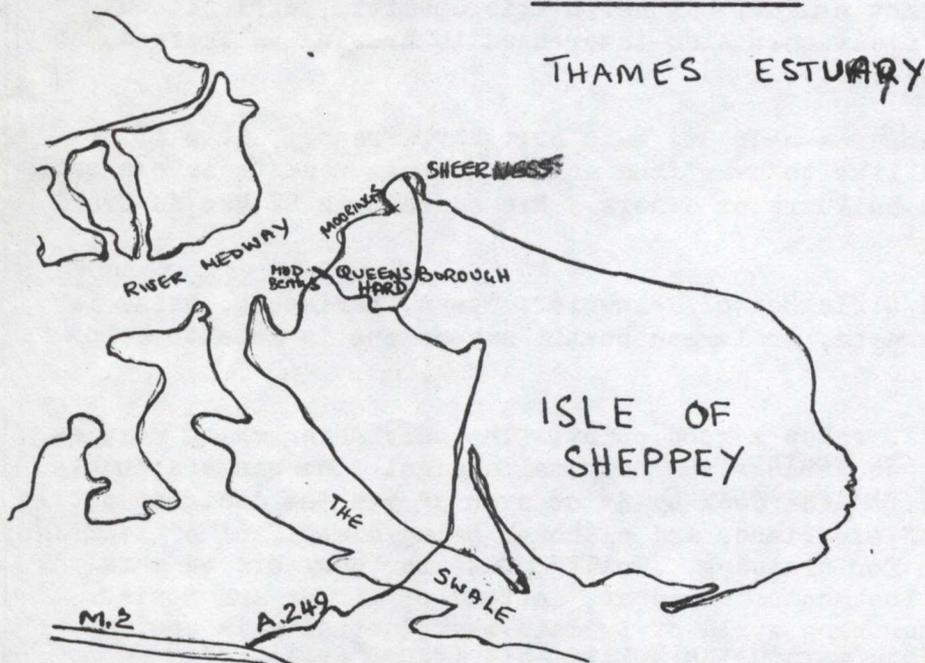
Income for 1973 as at 26.11.73 was £593.37 - Expenditure for 1973 £376.53 with the carry over from 1972 balance there should be £326.13p in the bank but actually there was £338.76. Continuing on her duties of collection of subs etc, up to time of handing over to New Hon. Treasurer at 5.1.1974; Cash at bank was £393.72p (according to the actual BANK STATEMENT)

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New Hon. Treasurer is Keith Searle, The Caravan, New Road, St. Blazey Cornwall. He is expecting your 1974 subs NOW! £1 renewal for U.K. and Continent, £1.50 for U.S.A. and Canada - £1.60 for Far East, Australia, New Zealand and South Africa - which includes cost of Air Mail postage.

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SPRING BANK HOLIDAY MEETING 25th to 27th May 1974 - POLYCATS MEET AT ISLE OF SHEPPEY - Queenborough Hard

HOW TO GET THERE

Friday night / Saturday 25th May, members arrive by road, or boat, make way to Queenborough Hard, where you will find "Carissima" moored. Information will be given about caravan sites, bed-breakfast, tent sites or moorings.

Saturday 25th May chance to look over and sail on members boats, barbecue in the evening, with beer, bring your own chops, sausages etc.

Sunday 26th May Mass sail to Horse-Shoe Island for lunch, weather permitting. Evening - sing song, on Dead Mans Island (opposite moorings) bring your own victuals.

Monday 27th May chance to view Ted Johnsons new creation in the form of a foam sandwich ORO in the building stage, where any advice will be given.

For Bed-Breakfast advance bookings it will be necessary to send stamp addressed envelope to Ted Johnson, 9 Strode Cres, Sheerness. Also Ted would like to hear from members who expect to attend this meet.

ASSOCIATION NEWSPOLYCATS IN ULSTER

Kenneth J. Sampson, 21 Ferndale Rd, Carnmoney, Newtownabbey, Co. Antrim, very kindly wrote to us a long history of his building and sailing and from time to time telephones us of news of the Northern Ireland Polycats.

Ken has now agreed to be area Secretary for N. Ireland, which members please note.

We gather there are 3 Tane's being launched at the same time, and Ken will get pictures taken, other designs are Hina, Tangaroa and Narai planning to build, there will be quite a colony of Polycats in no time.

Ken first heard of the Polynesian Catamarans in the summer of 1968, at that time he was well into work on a 17' Lysander sloop by early 1969, but on reading an article on Polynesian Cats, he came to the conclusion that the Hina was just the boat for him.

Following on from convalescence, after a crack on the skull received in a riot, "A Policeman's lot is not a happy one"..... he decided to start work on his Hina. After this decision he was again hit with a well aimed half brick in yet another riot and this delayed his building work until 1970. All went well and he moved the boat out into the garden and set the hulls up level. He bought a 16' 6" length of Oregon Pine and made himself a much admired mast, he also made his own sprit. Time passes and he weathered the delays of shipping strikes which held up delivery of sails etc, but finally the day arrived for launching in August. He was towed to his mooring, raised the sails and cast off. There was a fair breeze and he admits his pulse rate had doubled as he was on the verge of finding out if all his work had been a success. All went well and "Morning Star" tore up Belfast Lough. There were four up, average weight 14½ stones and this didn't hinder the performance. Having taken time to tack, gybe, and generally get to know the boat, at the end of the day the unanimous decision was that they really had a boat that would go places fast.

He continued the rest of the summer to enjoy some good sailing. The following season he designed a couple of cabins with just enough room to sit and cook a meal and with shelter enough to sleep in. During 1971 he pottered around fishing and sailing every chance he had. In 1972 he had some success during a club race one evening. Following about 5 minutes after the gun he chased after the boats . and in a Force 5 he charged past the entries, and finally ended up 3rd in the Race, although Ken still swears he was nobbled as the two boats in front didn't round one mark!.....+.....!.....

It was August when he realized his dream to sail across to Scotland. With an ex-dinghy man now converted Cat man, he made plans. He fitted a small outboard engine, bought a "Seafare" R.F.D. All preparations made they set off one Friday evening from Carrickfergus. The wind was pitiful and they fitted a "type of spinnaker" supported by a long pole, this worked well for a time but eventually they had to start the motor. They arrived at Whitehead where they settled down for the night. Ken says "did you ever try to get your "oilies" and clothes off in a very small cabin?....." Once settled for the night Ken, began to think of a larger cat - say a TANE. Next morning they set off with the wind in the N.E. which increased and the sky became overcast. White topped waves appeared and spray from the bows flew over the boat. The Scottish coast was not in sight nor the Ulster coast. The wind they estimated was then Force 6, but they kept up all sail. Out in the Irish Sea amongst the big waves Ken was experiencing the seas for the first time, and admitted he was slightly frightened. However, he soon got over this feeling and even got his movie camera out and took a few feet of colour film. One thing worried him and that was the water laying in the front

contd... ASSOCIATION NEWS

POLYCATS IN ULSTER

decks between the bulwarks and the front beam as he had not made the drain holes big enough (at Port Patrick he put this right). After three hours sailing they spotted Kilantrigan Lighthouse and altered course to the South East as they were a couple of miles above Port Patrick. Another hour found them in Port Patrick harbour. They met the crew of a motor launch who had crossed from Carrickfergus that morning and some of the crew were a bit knocked about by the weather out at sea. They were very surprised to see Ken come sailing in from the sea in such an easy manner. The answer to that was simple, they should have a Polycat. The return journey was uneventful. Wind was in the S.W. blowing a steady Force 5. A cruiser went down at the entrance of the Belfast Lough during the morning and one person was drowned.

During the winter Ken decided to sell "Morning Star" and she was bought by Dereck McLean. It was a sad experience really for Ken as he had become very attached to his Hina. He said he felt like a father would feel when leading his only daughter up to the altar to give her away to somebody else.....

Now came the job of acquiring materials etc, for his new boat. Chatting up the foreman in charge of demolition work etc; one day strolling through a plywood warehouse he found a pile of $\frac{3}{8}$ " Israeli plywood sheets and talking with the Asst. Manager, who had forgotten the timber was there, he did a deal for £2.50 a sheet. Later he met a chap who first of all intended to build a 17' Lysander sloop, but on talking him out of it, he also ended up building a TANE. Ken having decided to sheath his boat with GRP talked things over with his new found friend and they decided to pool resources and he admits that at times two heads are better than one. Ken's boat is altered slightly to suit his family, who are keen sailors. He has used stringers $1\frac{1}{8}$ " instead of $\frac{7}{8}$ " and the cabins are wider than standard with a curved roof. He will fit a drop table attached to the shelf in the galley hull so the family can sit sideways for meals. The deck will be the usual slatted type. His hatch covers will come from timber panels from old office counters and for here and there he has been given some pieces of oak, and mahogany. Ken then got down to the work of building, once he did get side tracked and put some screws in wrong. From then on if anyone called he would continue to plane away and grunt answers back, in the end he got no more callers. Except the genuinely interested Polycat people.

Sheathing came next and he and his other Tane building friend saved up for the mat and resin (hence he says, not being able to come to the P.C.A. Annual General Meeting). They found this job very hard work stippling glass onto plywood hulls but with persistence and hard work the job was done.

Spring 1974 - he hopes to complete and launch "Mitikeje" named to include all the family, MI = Michael TI = Timothy (sons) KE = Ken JE = Jean(wife)

Gary the other Tane builder and Ken hope to launch their boats together and there is another Tane at Strangford Lough being launched around the same time. Anyone interested to journey to Ireland can contact Ken by Telephone Glengormley 44330 for the actual launching date and time.

Dave Morris at Larne, built a Tane last year and is actually sailing the pants off everything, including a Nicholson 35.

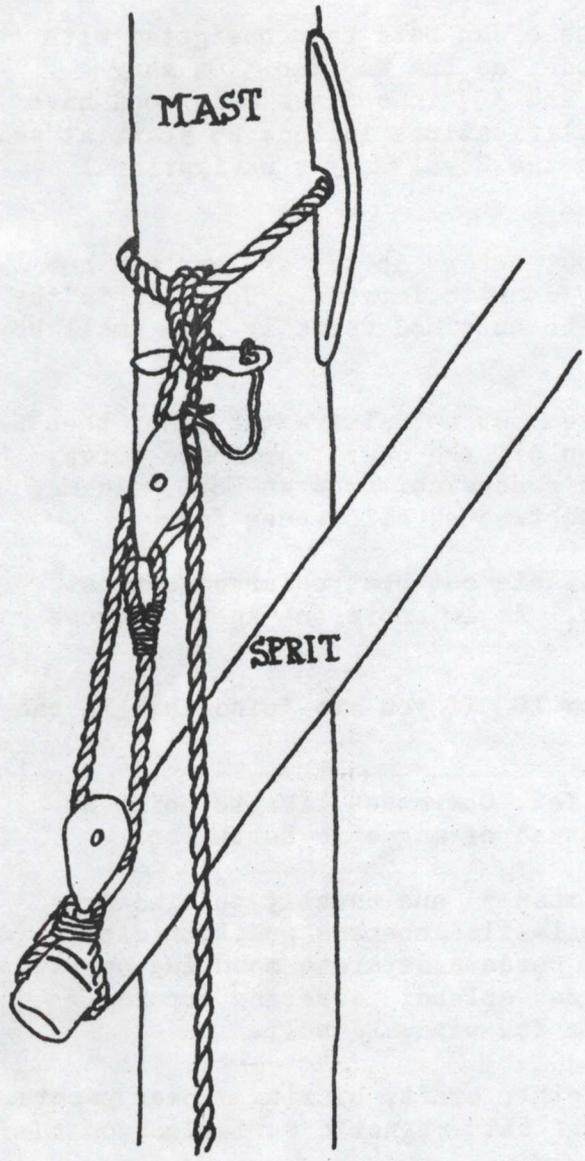
We are sure in the troubled times of Ireland all wish Ken and his family happy sailing on "Mitikeje" and look forward to more news of their sailing adventures.

We have some pictures of "Morning Star" Ken's Hina, in the Builders/Sailing folder for members to see at the P.C.A. meetings.

Asst. Editor.....

WIND AND SAIL

Roland and Ginny Huebsch, Ontario, Canada

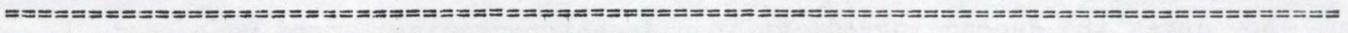


I believe there is a law of meteorology that states that the fairness of the weather is inversely proportional to the amount of time available to enjoy it. This was certainly true this year with the finest summer in years combined with the busiest work schedule I have ever had. The only trip of any distance we made was across to Niagara on the Lake and back a distance of 32 miles each way. This was accomplished without incident or much speed, the winds being very light. Finally, two days before I intended to haul Huaheine out in November she was struck on her moorings by a 40ft trimaran that had broken loose in a gale. Her mooring lines were ripped out of her and part of the bulwarks carried away. Fortunately, she separated from the trimaran and blew ashore right at the foot of the club ramp, and some members who were present hauled her up without sustaining further damage.

All the work this summer means I now have enough money to start shopping for materials for our NARAI. I want to get these as soon as possible before the prices go any higher but I won't be starting her before Spring: the work on the house taking longer than anticipated (isn't this always the case?).

(See left) a sketch of the method I use to hold up the sprit on Huaheine. When the wooden pin is pulled the whole thing comes free, leaving only the streamlined wooden chock and grommet around the mast which does not interfere with the luff lacing.

Roland Huebsch also produced the front cover sketch for this issue of "The Sailor".....



Graham Cox, Poste Restante Auckland New Zealand as from February 1974.

has sold his Tane not quite completed, and now has a ketch "Poeme" a converted whaler, painstakingly prepared for circumnavigation over tens years by an old man who then found out he was too old to go. Graham is now off to New Zealand across the Tasman and later on into the South Pacific -

It is difficult to keep up with him he moves so fast, but we wish Graham a safe journey and look forward to hearing again of his adventures.

Editor.....

NAVIGATION - Not an exact science in a South Coast Tane

by Commander J.W.F. Briggs, Royal Navy

Over the past two years very few seagoing vessels can have been navigated with quite such a lack of skill, let alone exactitude, as *Lea Mao Mao*. On many occasions errors of 50% in distance made good and 30° in courses made good have been achieved - no mean feat. Her owner's qualifications include 25 years at sea and command of a number of warships, including the Royal Navy's navigational training frigate for 2½ years.

It may therefore be helpful to other Polycat owners to try and explain how and why such ineptitude occurs and what can be done to improve. However, in the final analysis the best positions will always be obtained verbally from small boys with buckets and spades on sandy beaches.

Assuming the departure port is known, often but not always the case, then the course to steer to destination can be taken off the chart, ordnance survey map, A.A. book, or, as once I did in the Queen's service, from an ESSO Road map of Holland. To this course must be added or subtracted allowances for:-

- a) Tidal Stream across. Sometimes predictable but best observed against lobster pot floats, buoys or vessels at anchor. At 10 knots one knot of cross stream needs a 6° aim-off.
- b) Lee-way. Say 5° when beating but allow 10° if you are 'pinching' in bad weather. This reduces to 0° on a dead run.
- c) Compass Error. Are you carrying a knife? Compasses like to point at outboard motor magnetos and radio speakers instead of magnetic North too.
- d) Steering errors. Probably never less than 3° and usually to windward, especially when broad reaching at speed. A well-sited compass position close ahead of the helmsman helps. In a Polycat one needs a separate mounting on each hull. I only have one, amidships, which produces splendid steering errors, especially at night, since we always steer from the windward hull.
- e) Random Errors. These include dodging other craft, buzzing slower yachts and using ancient charts with hopelessly out-of-date magnetic variations on them.

Sometimes all these errors cancel. You know when this has happened because you arrive in exactly the right place. In particular, steering errors and leeway often act against each other. On the other hand, they can all accumulate to put one into the wrong county, if not the wrong country.

Now comes the second ingredient to a decent reckoning: speed made good. I can't afford even one decent log let alone one in each hull needed for an accurate answer in any cat. One can use a chip log and a stopwatch (with 17 feet between knots on the line over a 10 second run) but this only gives speed over the ten seconds concerned, not the distance run over, say, four to twenty-four hours. Speeds vary so much as a Polycat accelerates down a wave and then slows up again not to mention wind changes that the answer is bound to be inaccurate. I prefer to tow a mackerel spinner to a log and so I guess the speed by looking at the wake and subtracting two knots by day and three by night in my own boat. One should add the same amount in other people's craft. Tidal stream along the track is important, especially over odd numbers of six hour periods in coastal and channel waters. Usually one is astern of dead reckoning, especially at night when that quiver in the luff is harder to see. This is no bad thing since running full tilt into cliffs in the dark is a gloomy way to be awakened from a dreamless sleep at the helm.

contd.....

NAVIGATION - Not an exact science in a South Coast Tane

It should be remembered that the radius of the 'circle of error' increases steadily with time. It is quite a good idea to spin a pair of compasses around one's cherished 'dead-reckoning' position every few hours to see whether any horrid rocks, wrecks or unlit buoys in the dark may suddenly be alighted upon expensively and at great speed.

Eventually this radius becomes so large that a good old-fashioned 'fix' is called for to establish a new departure point; hopefully within the circle of error. Fixes come from not less than two position lines which should lie at not less than 30° to each other. These position lines are sometimes straight, such as compass bearings of known objects or curved such as distances from known objects. They can also be odd-shaped such as from soundings related to fathom lines on the charts. The great thing is to use all position lines available at the time and the more the merrier. A fix of two lines gives no warning if one of them is shaky.

Here are some of the types of position lines that I have found useful in Laa Mao Mao:-

a) Compass Bearings. A small hand-bearing (or prismatic) compass is O.K. providing you let it settle (or take the mean of any residual swing) and keep it away from ferrous metal. A transit of two known objects in line is best of all since this gives you your compass error as well.

b) Ranges. Raising or dipping a light is easy. The charted range of the light is for a height of eye of 15 feet and needs reducing by 2 miles in a Polycat. Guess-timating ranges can be a help if you have no sextant for vertical angles against charted heights. From a height of eye of 8 feet the sea horizon is $3\frac{1}{4}$ miles away for instance. Blowing your foghorn at a steepish shore gives a good range too. 9/10 of the time between blast and echo in seconds is the distance off in cables.

c) Soundings. You may need to heave-to to get useful soundings over 5 fathoms but if you allow, i.e. subtract the predicted height of tide, you can get an excellent, albeit crooked position line in a well-charted area. Nature of the bottom can be significant. If so then remember to 'arm' your lead with tallow or grease.

d) Highly Miscellaneous. These include:-

- i. Well defined shipping lanes and cross-channel ferry routes.
- ii. Cumulous cloud formations over high ground that is still beyond the horizon.
- iii. The glow of city neon lighting reflected off clouds at ranges up to 40 miles.
- iv. Police radio transmissions in the right-hand of transistor V.H.F. bands.
- v. Tide rips, especially in fog when close inshore.
- vi. Ports of registry of small fishing vessels.
- vii. Low-level civil and RAF aircraft routes.

No doubt there are many more but it's only by using any information available that one can land up at the right harbour entrance in bad visibility after many hours of beating to windward in light fickle winds.

So far I have been banging on about offshore navigation. Close pilotage is important too if one is to make the best use of our very shallow draft to dodge

contd.....

NAVIGATION - Not an exact science in a South Coast tane

foul tides and cut corners when racing or near pub closing time. The seaman may risk his luck a little when the tide is rising and the bottom is soft but at other times a slim 7 foot boathook marked every foot provides quick and accurate soundings inside the one-fathom line. Use of the handbearing compass can minimise risks in the tightest corners. There are basically two techniques:-

a) Running a Bearing. Choose a conspicuous mark ahead (or astern) on the safe approach (or departure) course. Note the magnetic compass bearing from the chart and get your vessel onto this line in good time steering to allow for drift. The trick is not to take a bearing of the mark but to look along what the bearing should be. It will then be obvious which way to turn to correct, and how much.

b) Use of Clearing bearings. If you are beating or may have to avoid other craft then the safe limits either side of the channel can be kept within by manoeuvring between limiting bearings of a head or stern mark. These are known as 'clearing bearings'.

These techniques often depend upon knowing the height of the tide at the time. Where there are two high (and low) waters every day, as in European waters, this is very simply done by using the proportions of 1, 2, 3, 3, 2, 1, for each successive hour either side of the nearest high and low waters. This is applied to the 'range' i.e. the difference between high and low water heights from the tide tables. For example, if the heights are 14 feet H.W. and 2 feet L.W. and it is 4 hours after H.W. then the range is 14-2 i.e. 12 feet. The proportions above add up to 12 in all so each is worth 1 foot in this case. Four hours after H.W. means 1+2+3+3 i.e. 10, so the height of tide is 12 feet.

I find that when there is only two feet under the keel, speed drops, the stern settles deeper and the quarter waves steepen and start breaking. This is where one's seaman's eye can save a crumbles when every other precaution has been neglected.

Some 'hardy annuals' that have caused me to be subjected to public humiliation are:-

- a. Not taking soundings with sufficient frequency
- b. Wishful thinking, especially regarding one's speed and ground to windward.
- c. Insufficient allowance for the various forms of drift.
- d. Beating up very narrow channels against the ebb rather than use a few pints of petrol.

With the very limited space in a TANE what equipment do I take? Plastic envelopes for the few pre-prepared passage charts are a must. Tide tables, the Channel Pilot and an elderly Adlard Coles 'Channel Harbours' comprises the library. Dividers, compasses (for range position lines) and a douglas protractor (instead of parallel rulers) are all essential. I used to take a sextant for ranges and latitude but it didn't earn it's space. The hand-bearing and steering compasses are both small Sestrels with interchangeable fittings.

Finally, I would emphasise that it has to be a mighty unpleasant grounding to compete with even a moderate collision so please never be tempted to neglect a seamanlike look-out while trying to achieve navigational perfection - you never will.

Example

In the example a Polycat left Port A at 1700 and her skipper considered that the various drift errors cancelled so he steered the direct course of 280° magnetic. He estimated his speed as 12 knots, laid off his dead reckoning and from this concluded that he would "raise" the island light at about 2000. At 1900 he sighted the well-known silhouette of the A - B ferry some two miles to Port shortly before sunset.

WIND AND SAIL

Would you like to sail RAKA?

She is moored at Watermouth Cove near Illfracombe, North Devon and is available for charter for day/week, deepsea/inshore, fishing/Sailing with skipper.

If you bring the family or come with friends, we can offer one of the following arrangements:

Sleep and cook aboard Raka
Tent in a field nearby
Bed, breakfast, evening meal in guesthouse.

Magnificent coastline, safe beaches, secluded coves. Any plan discussed with pleasure. Write to :- George Payne, Tythe Barn House, Castle Street, Combe Martin, North Devon.

NO NAME TANGAROA

by Godfrey Stephens, Victoria B.C.

Winter is upon us, and at last I have some time to write to "The Sailor man" for those interested in what has happened since launching my crazy Tangaroa size Cat, which has no name yet. April 1973, I rigged the boat in Victoria with a fabulous old set of poles from a wreck called the Cantatta, a 28 ft, Sea Bird Yawl, with new dacron gaff rigged sails which I got for \$250. I took off with very little knowledge of sailing or navigation and said to myself, why go back? I built the boat to keep moving around the world with anyway; so after some narrow escapes, trying to keep off the shore in a storm with waves washing right across the decks with everything reefed as far as it would go, I arrived at Vancouver and bought some used sails to adapt and a phenominally long shaft Seagull, 4½ feet long, which pushes her reliably, when there is no wind, and can be hauled up completely out of the way when not in use. It is a Silver Seagull 10 Canuk h.p. - 6 British. With lots of gass, food, and a huge pile of collected hardware, as I am continuously building and changing things, I took off alone North to a hidden cove, and next day had an incredible passage surfing nearly all the way to Hornby Island. Had to keep it very cool because the bows tended to dig in when those beautiful canoe sterns lift to the wave and then the incredible push. I have since learned to reduce sail and not run dead down wind in a huge following sea. I have since childhood been stunned by the fantastic dugout canoe of Captain John Voss, the "Tilikum" which sailed from Victoria to England at the turn of the Century. It is now in the Maritime Museum in Victoria. Brought back here from Canvey Island in 1925. His book describes sea anchors in great detail and will experiment with them in different conditions when I take off next year for the Great Southern Ocean. Anyway, I made it 300 miles up to Blackfish Sound and the ancient Indian land around Alert Bay. Had some fabulous sailing and met a lot of wild people, including Dr. Spong who is very staunch in trying to wake people up to the intelligence of whales. Anyway made it around Cape Scott, and into Winter Harbour where Captain Cook anchored. This is where the fun began. Stormed in and waiting for a westerley to blow me down the west coast of Vancouver Island. I took six Canadian T.V.film crew out in a really brisk wind in the big harbour. They were waiting to go to Wild Triangle Island to film the Puffin birds. We were really moving and just a cosmic churning river of white water between the hulls, and terrific strain on everything, but so much fun, cameras going like mad. I worked it into a super reach and a huge gust came out of a cleft between the mountains, and BANG the mast snapped and broke right at the throat of the gaff jaws and three sails went over board.

WIND AND SAIL

contd...

NO NAME TANGAROA

I yelled asking if everyone was O.K. Yes! Oh the scarry thrill of a dismasting! We pulled everything aboard and limped back to the dock, where I got an old trolling pole and spliced this to the top of the old mast, and used this to get 150 miles to Ucluelet. On Wickaninnish Island I cut a 33 foot Sitka Spruce, peeled off the bark, lopped off the knots and stuck it up in a really heavy 2 x 12 yellow cedar tabernacle. The 2" thick Gunwood ones I had before split and bent a 3" bolt double, when the mast came down.

In Ucluelet Harbour, I worked on everything; 18 turnbuckles and heavy fishermans 7 strand galvanized wire, a 2 x 12 yellow cedar plank runs the whole length extending beyond the netting beams which are sitka spruce poles all heavy duty stuff. The plank is 36 feet and is great to walk on to tend the three headsails, the bow sprit is bolted to this plank. It looks powerful with cables and chains to take up stress. I am so indebted to James Wharram for enabling me to get mobile and learn the ways of the sea, and have a home which can go anywhere. I think James may be a bit shocked in some ways, if he sees this one. But I am sure he would like the strength and natural wood everywhere. Lots of driftwood and natural knees of Red Cedar roots to hold the planked bulwarks solid with real scuppers. The bulwarks are three 1"x 4" planks, instead of ghastly plywood. I have given more sheer to the actual hulls by bending the top bow and stern top stringers about 3" up the stem and screwing them on, and when the bulwarks were on, built boxes almost back to the hatches all round so there are buoyancy chambers fore and aft, which are planked herring bone style with Red Cedar. Looks very beautiful. All the decks and bulwarks and wood are oiled with an ancient method. Pine tar, Linseed oil and Turpentine. I would never varnish wood after the rich mellow dull colour of pine tar. A steering wheel mounted amidships on the port side so I can steer from the cabin hatch, and feel the warmth of the Little Dot Ironwood stove full of good B.C. bark. The wheel is connected to the tillers by a system of pulleys under the deck. If you want to steer using the tiller instead of the wheel, simply untie the lines. The mizzen at this time is bermudan, an old jib hanked onto a cable pulled taut with a turn buckle. One day this summer I looked up from a sculpture I was carving on the deck, and there was Gregory Warnick and Barbara. Just in on their first voyage in a beautiful little ketch Tane "Sherazade" with flaming red Junk sails, a dog aboard, and two smoking wood stoves puffing away. Oh what a fantastic summer. We sailed tied together screaming up the Albernie Canal from the graveyard of the Pacific. Barkeley Sound and the Wildly wonderful west coast of Vancouver Island. We sailed right up the Somass River and anchored midstream. Hibatches cooking, pots of coffee and salmon gifts from friendly fishermen, and embibing of all sorts of intoxicating licquors that just made everything perfect. Naked with our girl friends diving into the river. We sailed to Victoria together and all through the Gulf Islands. Someboats we met were a Gulfweed by Hanna, a Friendship Sloop; a nearly completed Narai with old tarps for sail power, and Mike Parkers' green junk rigged Narai. Gregory is a firm lover of wood also, where ever you can use it, he has sections of old mahogany (packing crates for Japanese motorcycles. Got to tell you of a storm I was in. In sight of land, and able to run in if it got too heavy. I forced the boat to do all kinds of antics to see where some of the weak points would be to fix and strengthen, and being a line I did not have to worry about jeopardizing anyone else. I "Ocean Bashed" literally crashing into the breaking waves knocking the slats up. Ripped my headsail to shreds, stretched the rigging so much I'll have to take up the slack of the chains, took waves broad side, and got one hull almost out of the water with a knife ready to cut the mainsheet. Wow! it really can take a smashing. I am leaving for sure, weather permitting, end of Spring 1974, either for Hawaii and onwards into perfect beauty. Hope I meet all of you and will show you lots of photographs, paintings and wood carvings. Meanwhile should be glad to hear from you, P.O. Box 1656, Victoria, B.C. Canada.

Godfrey Stephens.....

HAMMER NAILS AND A BIT OF GLUEBUILDING OF LEHAVA HAYAM

By Philip Wrestler

There is a strange phenomenon that happens when you build a boat. You build the hulls upside down, turn them, deck them and build in the furniture. Then you join them up, fit the mast-steps and decks. Finally, you launch. Immediately there is a change. You no longer have a building project but a boat. And this boat is no longer a part of you but independent, with a personality and character of her own. You see, I've said her own. Up till now it's been 'it'. Now, however, you find you've got a lady to deal with and if she's a Polynesian Catamaran, a beautiful lady. For there's one thing about Jim's designs, they're always beautiful. And when you see this lovely thing across the water, riding to her mooring, the years spent building - in our case three and a half - fade away and you just cannot believe that you created her.

We started LEHAVA HAYAM (Hebrew for 'Flame of the Sea', because of her red colour) May 1st 1970 in the garden of our cottage in Sussex. Because I had very little faith in my skill as a carpenter, let alone a shipwright, I'd put off building her myself for some two and a half years whilst I looked around for someone to build her for me. Mind you, Anne had no such qualms, being quite convinced that I could manage it and encouraging me to go ahead. I protested my incompetence loud and long but to no avail. I used my trump card, pointing out the garden would be messed up by turning it into a shipyard. That didn't matter, she said, we could put it right afterwards. And as for my lack of skill, hadn't I had enough carpentry practise modernising the cottage? So I gave in and bought the materials.

I decided on the best materials that I could afford and for three reasons. Firstly, I knew it was going to take a long time (though I didn't know quite how long) and it seemed ridiculous to spend all that time and effort on rubbish. Secondly, with th reservations I had about my skill I thought that really good materials would somehow compensate for my deficiencies in that direction. And lastly, I am by religion an orthodox coward and I wanted a nice strong boat that I hoped, would not fall apart the first time we took her to sea.

In his plans, Jim specifies $\frac{3}{8}$ " ply for the hulls. Many fine Narai's have been built using this thickness of Douglas fir plywood, However, I plumped for Thames Marine ply, $\frac{3}{8}$ " for the decks and $\frac{3}{8}$ " for the hulls. To ease my conscience as far as the extra expense was concerned I made the bulkheads of $\frac{3}{8}$ " exterior grade WPB ply. I now realized that my two and a half years of waiting were by no means wasted. I had seen much of other people's cats, read quite a bit about materials and construction and this stood me in very good stead. For glue, I decided on resorcinol, at least for the hulls (I used urea for the decks) and I bought half a hundredweight of Aerodux 500 and half a hundredweight of hardener. This seemed a vast quantity at the time but it could have been only a third of the total amount I used overall. As for fastenings, I would use zinc-plated screws. Now, I know that Jim built TEHINI very well using galvanized nails. But I was going to do the structural work pretty well on my own which would mean nobody with a dolly on the inside being steadily deafened whilst I hammered in the nails from outside. The other important decision I made was about the sheathing. I would use nylon and sheath the hulls up to the gunwales.

Now, the nice thing about building a Polynesian catamaran (at least, a wooden one) is the enormously rapid progress you make to start with. You really get quick results. Within a week, I'd lofted out the boat on sheets of hardboard. made all eight bulkheads for both hulls and was well on the way to completing one backbone. The following week saw the first set of bulkheads erected with the backbone slotted into place and the start of stringering up. By the time May was out, the first hull was ready for planking. Here I made a slight alteration to the plans. In the normal way, the plywood planks are glued and screwed (or nailed) to the inner keel of 1" thick softwood. Since this is a rather important

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BUILDING OF LEHAHA HAYAM

join, I decided to double up this seam. I did this by glueing and screwing a $\frac{1}{2}$ " fillet all round the edge of the inner keel.

1970, you may recall, was a marvellous summer. In fact I was held up only once, right at the start, by rain. It was a real heatwave! The trouble, when you build a boat out of doors in a heatwave using glues that go off in the warm, is that you have to work in a very great hurry. Here is where I found my decision to use screws paid off. Each plank was marked, predrilled and the countersinks were bored. I then called for Anne. Whilst she put the Aerodux on the stringers, I did the same to the plank. It was lifted into place and an average of 70 screws were driven home. I bless the powered screwdriver I used, I can tell you! Basically, this is a simple gadget that fits into the chuck of a 2-speed $\frac{1}{4}$ " drill. Anne would pop the screws into the holes whilst I drove them in and so efficient is it that she had to hurry to stay ahead of me. As soon as a plank was fitted, we cleaned off the surplus glue. We were meticulous about this having seen so many boats made ugly by masses of hideous glue runs. And it was then that Anne started the heroic task that was to continue throughout the building. Every one of the thousands of screwholes she filled and rubbed down.

Trimming away the edge ply preparatory to laminating on the keel is a laborious job and I thought it justified buying a power plane. However, when it came to it, whilst the power plane made a terrific noise, it wasn't very efficient and I found it better to use mallet, chisel and block-plane. It was only when it came to shaping the keel that the power plane was at all useful. Perhaps if I'd bought a better one, - say, a Wolf or a Black and Decker, it might have been more efficient. The makers of mine have since, I gather, gone out of business. Incidentally, I made another change from specifications in the skegs. I used two thicknesses of $\frac{5}{8}$ " ply, giving me a thickness of $1\frac{1}{4}$ " rather than three thicknesses of $\frac{3}{8}$ " giving $1\frac{1}{8}$ ". I also set them in differently. After shaping them to the keel, I glued and screwed a strip of wood $1" \times 1\frac{1}{2}"$ to each side, then glued and screwed the skeg into place through these strips. The first lamination of keel was slotted around it, the other two closed over this covering the join and giving a very strong setting. At last the day came when we could no longer put off sheathing, which we both dreaded and, heart in mouth, I cut my first 40' length of 56" width, 11 ounce nylon.

When you sheath a boat with nylon, you stick the cloth to the wood using resorcinol glue. Obviously, the fewer the number of seams, the better the finished job will be, so the first thing to do is to mark out where you expect the seams of your panel to come. Then you tape round this using 2" or 3" Sello-tape or something similar. A stapling gun is essential, loaded with $\frac{1}{4}$ " staples, and masses of $\frac{1}{2}$ " wide battens (we cut up hardboard). You also need squeegees. These need only be pieces of hardboard, about 6" x 3" width with the edges sand-papered nice and smooth. Each section of cloth has to be put on in one continuous operation - you cannot leave it in the middle and come back to it the next day for the glue gets into the nylon, hardens, and you cannot make it stick again.

We started by stapling the nylon into position in the middle of the hull. We spread the glue over a three foot area, then we squeegeed the nylon into place. You really need to work hard with the squeegee so as to force the glue well into the nylon (without it coming right through) and to get as thin a film of glue as possible. And you want to make the nylon as tight as you can. You then staple at the end of the piece you've done and along the top and bottom edges. Then you do another three feet. And so on until you finish. As soon as a panel was done and the glue set, it was painted to within about 3" of the seam with Cascote. This is a vinyl paint made by Borden Chemicals Ltd for use in their own nylon sheathing system. Cascote is expensive but extremely good for, not only does it make the nylon completely waterproof, but it also seems to act on it like

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BUILDING OF LEHAVA HAYAM

aircraft dope, making it very hard.

We found it best to work in a definite order. First we did the long panels, one each side, from the gunwales up as far as the cloth allowed. Then we sheathed the skeg (bringing a 2" overlap down onto the keel - all seams need to be 2"). Next, we did the keel, and finally the stempost and sternpost. And it was a proud day when we had the first hull fully sheathed and painted with Cascote, knowing that it was proof against any weather that might come. And it hadn't taken very long, either. In order that we could most benefit from the experience gained from the first hull, I decided to tackle the second one right away - fortunately there's room in the garden - and I looked forward eagerly to seeing two beautiful hulls standing there side by side.

On the 1st of October, five months to the day from the start of building, the village football team assembled to turn the hulls. I felt that, using the system I'd worked out, the job could be done by about half a dozen men and I assumed that, of the eleven brawny football players who promised to come about six would actually appear. But I didn't take into account the curiosity of everyone in the village to see what I was up to and when it came to it, no less than seventeen turned up! In an hour we'd turned both hulls, fed everyone with cider and sandwiches and the football team was away. The actual turning was done with four 12 foot levers of 2" x 5" wood. When one hull was turned, we transferred them to the other hull and turned that. A lever is laid along the hull against each of the centre cabin bulkheads. The other levers run underneath the hull and are bloted to the 'legs' of the centre cabin bulkheads and to the first levers. You now have a very strong 'scissors' arrangement. The frames for supporting the hulls right way up consist of three pieces of 5" x 2" timber bolted and roughly jointed together to a 'U' shape with triangulations to keep it rigid. Diagonal grooves are cut in the up-rights to take 2" x 2" wood 'knuckles' that will bear against the hull and support it.

For turning day, half of each frame was demounted and bits of carpet nailed to where the keel would rest. Half of the team lifted the levers until the hull reached the point of balance (when you lift the hull, everything comes off the ground except the 'legs' of the centre cabin and it was very reassuring to know that the weight of the hull was being taken by good solid levers instead of two pieces of 3" x 1" wood). The other half of the team lowered it with the levers until the hull lay on its side, the support frame being held upright in position. All we had to do, now, was to unbolt the levers and raise the hull until it stood in the frame. The other half of the frame was quickly bolted back into place, carpet-covered 'knuckles' clamped into position (until they could be bolted) and we were ready to go on to the next hull. Incidentally, so good and efficient were our frames that I never had any qualms that the hulls might fall over. For two and a half years they stood there, firmly and securely holding them up.

Once the football team left, I walked round in a kind of daze. I really thought - seeing two hulls standing there starting to look like a catamaran - that I'd made a giant step forward. Little did I know that I was just about to start building a boat! As I said earlier, it had been a really dry summer. But on the night of October 1st, it rained. And how it rained! Next morning I nearly had a fit at the sight of gallons and gallons of water slopping about in my beautiful new hulls. But though I didn't think so at the time, nature was being kind to me. She was showing me that my weather proofing - tarpauline lashed well down - was pretty well useless. How did I solve the problem? I made some rough frames along the hulls, put my unused ply sheets onto them to act as a roof, and covered this with tarpaulins. I don't suppose it did the plywood any good, but I'm sure it didn't do it much harm either.

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BUILDING OF LEHAVA HAYAM

We had now come to the conclusion that we must sheath the decks too. In fact, as time went by we got hooked on sheathing so that everything that could be sheathed, was sheathed. That included the beams and even the decking between the hulls. And it was at this stage that we made another alteration to the plans. Our boat was going to be for us. That is, whilst guests or crew would be welcome from time to time, in the main she was going to be sailed by just the two of us. Therefore, her accommodation had to give the maximum comfort for the two of us. We wanted a really big galley; that meant no space in the centre cabins wasted with side decks or entry-hatches. We also wanted a proper marine loo in each hull placed where they could be comfortably used. Finally, we insisted on a double berth that would give more room than the designed width. This we achieved by raising the deckhead of the after cabins by about a foot, starting at the outermost deck-stringers. All we had to do now was to raise the bunkboard of our cabin and we had much more width. We divided the centre cabin of the 'sleeping' hull into three, using partial bulkheads. In the middle section I put a Headland loo with a wash-hand basin opposite. Each of the outer sections has its own entry-hatch. In this way, by curtaining off the loo, each berth has its own entry-vestibule-cum-dressing room.

The port hull is the 'day' hull. Entry is through a hatch in the fore end of the after cabin. Partial bulkheads divide this entry vestibule off, leaving about two thirds of the cabin for use as a chart-room. Right aft is the navigator's seat with a Waterloo marine toilet under. The chart table has a hinged centre-section which, when in position takes a fully opened Admiralty chart. There are shelves under the sides of the table. The entry-vestibule has a through-way into the galley. As for the forward cabin, I've turned this into a dining saloon. With seating around three sides (the side-bench is very narrow but still quite comfortable), four people can sit down to a meal at a table that rests on brackets fixed to the ship's side. This table can be lowered to convert the saloon into a single berth. Of course, this layout was only possible because I cut away the backbone. But that doesn't matter for once the keel is on, the job of the backbone is finished and it becomes a space-wasting nuisance.

Once Christmas 71 was past, we started on the beams; we brought all the timber for them into the house to get really dry (as you see, Anne is very long-suffering). Then we laminated them up. Nine laminations of 3" x 1" softwood with a vertical lamination of $\frac{3}{8}$ " marine ply each side and sheathed with 11 ounce nylon painted with 3 coats of Cascote. Encouraged by this I made up the rudders - sheathed, of course. And with the commencement of spring, it was time to think of painting the hulls. I didn't like the appearance of the nylon weave and certainly did not like all the additional skin friction drag that it would give. So this meant filling. Two coats of brush-cement applied with a broad bladed stripping knife and rubbed down with 'wet-or-dry' between coats. Then Anne went to work. Five undercoats, rubbed down between coats. And here I must point out that during the entire building I never lifted a paintbrush - Anne did the lot - inside and out (and it's just as well because I'm a rotten painter). Of course, when the 'Camper & Nicholson' type paintwork is admired - and it usually is - I give a modest smile.

For one delirious moment we thought we'd get the boat out of the garden and down to the coast during the summer of 72. Fortunately, reason prevailed. There were portlights to put in, a mass of work to do on the masts, the boom, sprit, netting beams, tillers and tiller-bar to make. And there were the mast bearers to make. I was unhappy at seeing wooden mast bearers flexing on other boats, so I thought I'd make mine of steel. These are basically 'U' section, 4" high, 8" wide and $\frac{1}{4}$ " thick. Lugs have been welded to the forward one to take an SL 500 anchor windlass. Each mast sits on a steel shoe with steel flanges under it. These flanges have been drilled to take a $\frac{3}{4}$ " bolt. The mast step is a similar shoe but the other way up. Thus the mast rests on a bolt. The advantage of this arrangement is that large tabernacles can be done without, boltholes do not have to be

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BUILDING OF LEHAVA HAYAM

drilled in the mast, yet it can still be raised or lowered with sheerlegs.

The summer of 73 came and we decided on June 4th - Anne's birthday - to move the boat down to the coast. I thought that it would be a nice birthday present for her to have her garden back. But we got the wrong people to do the job and I draw a veil over the disaster of overweight cranes and Laurel and Hardy type incompetence. Fortunately, the boat emerged from all this intact. Breathing a sight of relief I looked for another contractor and had a stroke of real good fortune. I contacted Terry Clune of Birdham. Right from the start I saw what real professionalism meant and never had a qualm during the entire operation. Nonetheless, it took until four in the afternoon before the boat arrived at Emsworth Yacht Harbour, a distance of 20 miles and we'd started loading at eight that morning. By then it was too late to start unloading and, it being Saturday, we decided to leave it all for Monday morning. Now, Terry Clune's job was done. All he needed to do was to drive his lorries under the crane and wait for the hulls to be lifted off. But that's not his way. He spent a full half day (for which he did not charge me) helping to line up and join the hulls, giving me the benefit of his considerable expertise. He didn't leave until he was satisfied the boat was secure.

The previous year I'd crewed for Bob Smart on the Oro GWOJUG GWOJUG for a cruise to Brittany and I was impressed by the plywood decks he had in place of the slatted decks that Jim specifies. They seemed to me to be lighter, cleaner, more comfortable and easier to make - a big consideration after 3 years of building. So, the next step was to fit these, for I'd already fabricated them, and then, of course, sheath them. There are six deck sections, each with four stiffeners underneath, all but one of which sit on bearers screwed to the beams. The odd one which is on the port hand between beams three and four rests on steel hangers at the level of the hull deck thus giving me a shallow but useful 'cockpit'. Steering is by wheel with the wheel-stand fixed to the third beam. In the best Jim Wharram tradition, the tiller lines are of fibre rope, not wire. I've made a seat for the helmsman the lid of which lifts so that binoculars, a thermos flask and other important paraphernalia can be stowed in the dry, ready to hand.

On the 25th of September we launched. Anne named her in her best ceremonial voice with a jug of our home-made cider and drenched me with it. I'd calculated that, with the additional thickness of plywood in the hull etc, she would float a little lower than the designed draught and I scribed the waterline accordingly. Still, it was very much 'by guess and by God'. To my amazement she floated an inch above her marks. Considering that there were no masts or stores aboard, I was well and truly satisfied. What didn't satisfy me was the installation of the engine. I must explain that on my previous boat - a monohull - I had continuous and chronic engine trouble and was determined that on this, my dream ship, mechanical power was going to be good and reliable. Now, if you think about this logically, there is only one answer to the engine problem, a large inboard diesel. But on Polycats, this is just not possible. One can have inboards, but because of the very small space in the stern holds one is forced into using weird indirect drive units which waste an enormous proportion of the power and also because of lack of space one has to have small petrol engines which are notoriously unreliable at sea. It seemed that I would be forced into using a large, wasteful American 2-stroke outboard (the 4-stroke being prohibitively expensive) and I didn't like the idea one little bit. Then, the Italian Carniti Company announced their 16hp diesel outboard. This, it seemed, was designed for pushing 50 ton workboats along which it was doing successfully. It seemed the answer to a Polycat builder's prayer. But there were problems.

For a start, the engine is noisy. That I can do nothing about. I did buy a GRP cover for it but this doesn't seem to have made very much difference. It's

BOSUNS LOCKER

NEARLY A CATASTROPHE

by Brian H. Turner

The important question of a name for our NARAI was with us from the moment we realised that this was a living thing that we were creating. The twin hulls, black with Epoxy Pitch, cried out for something Polynesian and dramatic. All the accepted Gods had apparently been claimed, so we racked our brains to find a name that would do credit to our masterpiece. One night over a pint (or two) we were once again exercising our minds, when suddenly inspiration struck. "Black Cat" I yelled. Slightly overcome with emotion, my boat building partner Brian Priest considered this. 'Certainly apt', he murmured. Then crafty devil that he is, he went to the library and found that it translated into Polynesian.

The following night over another post-boat building pint, he said "Black Cat" translates into Polynesian....." Now it was my turn to be overcome. "Tell me, tell me...." I urged. "The Black bit turns out to be OOLY OOLY" he said, but then we have a problem". Oh! I queried, all agog. 'Yes' said Brian. "Just how do you announce that the black catamaran just hove into sight is called the OOLY OOLY PUSSI".....

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A.F.Clement of Perth PHL 1PH says....."you may be interested to know that as a result of Pete Jezard's remarks in Bosun's Locker of Winter 1973 "The Sailor man" I went to a local junk yard to try my luck at scrounging wood. I got sufficient for a friend to build a shed and members of the local Red Cross Cadet Force got wood to make into bundles for fire kindling for elderly people. I obtained two pieces which could make up one stem of a Hina and some other pieces which may be useful. A lot of elderly folk ought to be grateful to Pete, if they knew about him. Firewood is dear in this district!

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Vic Felgate of Stockton-on-Tees wrote in February 74. After apologising for late payment of his sub " We launched our Tane "Noon Wine II" in June last year, minus decking, mast, rigging etc. We completed this work in one week of our holiday and the second week we sailed to Whitby (about 26 miles) for a well earned rest. Anchored off Whitby was Donald Dean with his Oro "Sis". He came aboard later and had a chat. Later that week we'd had a good days fishing so we took Donald his tea (fresh fish) and had another long chat aboard his boat. We were so engrossed talking about boats that the pubs were almost closing by the time we got ashore.

Our next holiday was in September and we were hoping to make Berwick but everything, weather-wise, was against us. We got as far as the Farne Isle but reluctantly had to turn back in order to start work again. Homeward bound we met up again with "Sis" in Sunderland. Donald Dean was hoping to get the boat hauled out to attend to her bottom planking.

We are going North again this year and hope to make Scotland. We have ordered a genoa as we object to mono's passing us. We seem to be under-canvassed in light airs. In a good blow she really goes. One day in November we had both reefs in the main and she was really going, no other sailing boats around that day, until we blew the clew out of a brand new jib..... Vic Felgate.

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BOSUNS LOCKER.

The winter 'Sailorman' arrived just before Xmas and was well read by us and other local boatbuilders. The story about Chris de Lance's Inshallah in Maui, Hawaii, piqued Cheryl's interest and mine as we were about to spend two weeks on that lovely island.

We tried hard to track Chris down but failed, However, we saw his boat and then by a stroke of luck, met another Polycat boat builder, Craig Matheson, who built his scaled up to 24ft Hina class, Ika Ika, with Chris. We spent a day with Craig on the beach looking at his boat which he had just hauled out for painting. The enthusiasm which he has for the Polycat designs and the exciting stories he told us about how his and Chris's boats "haul ass" through the high winds and seas around Hawaii just whetted our appetite to get our own boat complete. (One hull is built and we are ready to start the second now. We were going to fibreglass hull No. 1, but as glass is in short supply we decided to leave this until the summer when conditions will be better).

It's really nice to meet someone with a Polycat. I get the feeling that the ones I know are more than just boat owners: perhaps unconsciously they see in the Polycat a means to a better life. And to share that sentiment is a great experience. The day we spent with Craig and his friend Charlie on the beach near Paia, sun shining, wind roaring, palm trees flapping, munching homegrown bananas while our tans got browner as we sat on Ika Ika was a fine day.

Paul Thompson, B.C. Canada.

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Royal Yacht Association

The Annual General Meeting January 1974, voted in favour of our joining the RYA. One member wrote us when such a move was suggested last year. He was strongly against the idea and any other moves which would turn the Polynesian Catamaran Association into a conventional sailing club. He saw the adoption of a constitution for the Association as the first step towards hell. Polycat members are by and large anti-organisation and your Committee recognises this as one of the factors to be borne in mind. It is our aim to keep chaos at bay without introducing bureaucracy. An Association of over 400 members needs order in the conduct of its affairs if everyone is to get what they want or need from membership.

The RYA issues some very useful publications such as No.G9/72 "Recommendation for Safety Equipment for Sea-going Craft below 45' (15p)
No. G7/71 D.T.I. Registration and Classification of Yachts (20p).

Editor.....

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CALLING ALL NARAI BUILDERS

David Martin who is planning to build a Narai in the not too distant future, wishes to hear from members who have already built one. He built a Hina in the Gilbert and Ellice Islands and can be contacted at King George 5th School, P.O.Box 265, Bikenibeu, Tarawa, Gilbert and Ellice Islands.

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EDINAM, TAUN, DAKUA AND KAUVULA?

John McCartney, 19 Alton Avenue, Northcote, Auckland 9, New Zealand, has asked

BOSUNS LOCKER Contd.

for information about some exotic and little known timbers, the information he wants concerning sapele and iroko is given below; Can anyone help him with the timber named above?

| | weight 15% moisture content lb/cubic ft. | Strength | Bendability | Durability |
|--------|--|----------|-------------|------------|
| Sapele | 40 | fair | fair | fair |
| Iroko | 41 | High | fair | v. good |

Grant Masland, is putting his HINA UP FOR SALE

All bronze, fastened with all bronze and stainless fittings and rigging. Completely glass sheathed, sails are 8oz (American) blue dacron by Jeckells. New trailer with spare wheel, for details and price write Masland, 5303 Western, Omaha, Neb. 68231 U.S.A.

RUNNING BACKSTAYS

Do any owners actually use the running backstays or do they leave them set up? I would be interested to hear from members as to their practice and whether they find standing back stays on their own provide sufficient support for their mast.

Editor.....

JUST COME ONTO THE MARKET!

TANGAROA - completed hulls (painted inside and out) fibreglass decks, cedar slatted decking, hulls built of Mahogany marine ply, B.C. pine Needs spars, rigging and sails to complete.
Boat kept at Hurstpierpoint, Sussex. £1,000 ono - Telephone 8am - 6pm
01 - 639 - 4749, address 105 Salehurst Rd, Crofton Park, London S.E.4.

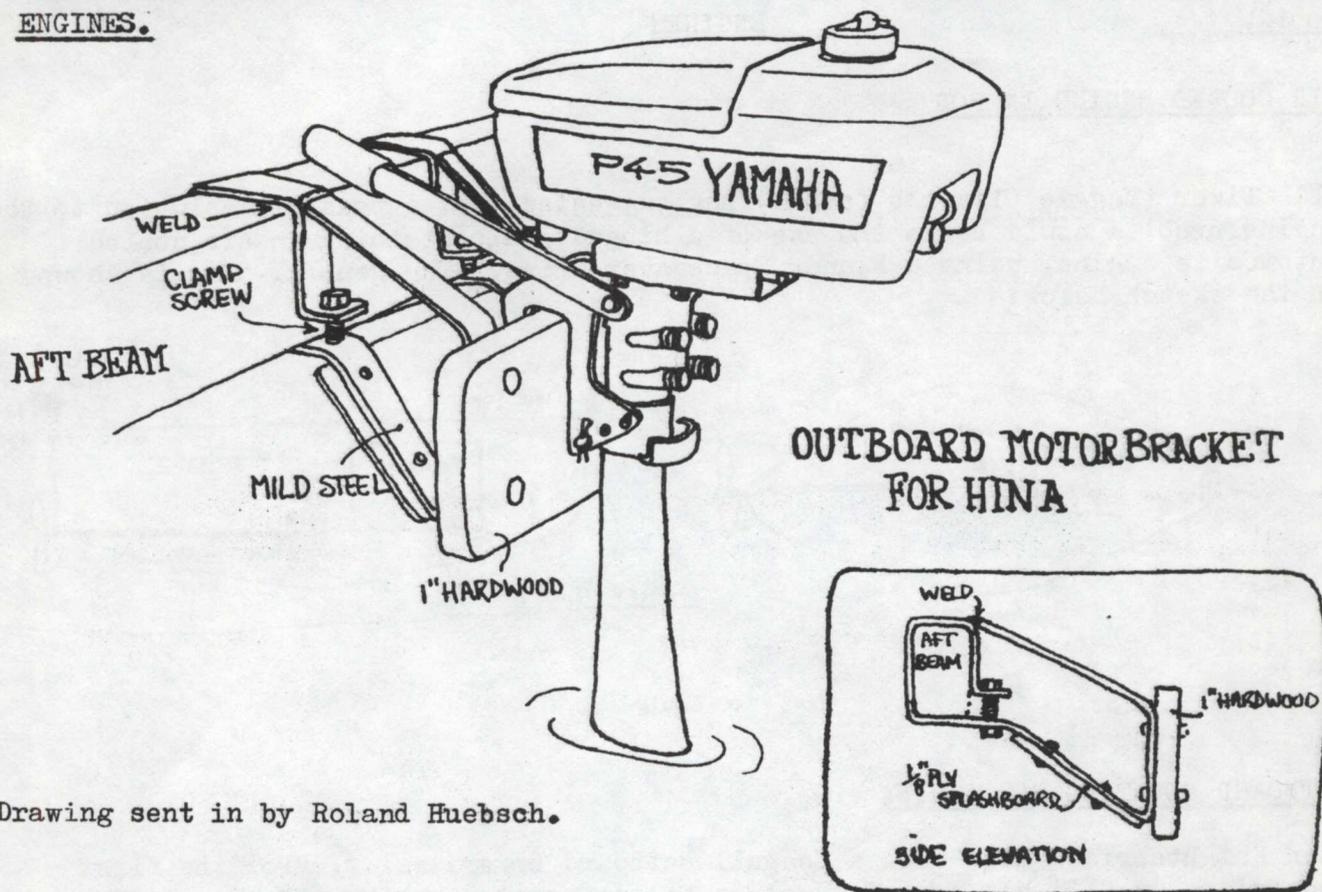
Pieter van Suddese of 17 Tansor Garth Westwood Estate, Peterborough, wrote just as we were going to Press:-

"I wonder if the following observation would be of help to anyone in the rigging of their boat:-

I first worked in a traditional boatyard as a shipwright, then moved to work in the Theatre as a Technician and have found a lot of similarities while rigging scenery. One is a cleat, which is made in cast steel with two holes for bolts. These are very strong as they carry the whole weight of flying scenery. They could easily be galvanized.

- 12" Flyrail cleat @ 75p Category 2
- 15" " " @ £1.10p "
- 18" " " @ £1.45p "

Obtainable from: Halls Stage Equipment, Wynne Rd, Brixton, London S.W.9.

ENGINES.

Drawing sent in by Roland Huebsch.

ENGINES HYDRAULIC DRIVE

Henry Martin Jnr, of RD 2 Box 215A Chestertown MD 21620 U.S.A. launched his ORO "Manticore" in the fall of 1971. He rigged her as a junk schooner with a cantilevered bowsprit so as to be sure it was self tending. The sail plan on trials was balanced so he reckons he must have done something right.

For power he has installed a small diesel with hydraulic drive. He made a retracting trailing arm for the final drive, with a sleeve adapter on the output shaft to fit the propeller. The hydraulic motor was installed so it was under water; he did not use a sleeve bearing on the outboard end as he considered this totally unnecessary. Henry recommends a Farymann Diesel, which is already set up with hydrostatic drive. He does not see using a hydraulic system from a tractor because it is probably an inefficient system and most likely 'junk'. These Hydromarin pump/motors are suppose to be 90% efficient giving an output efficiency of 80%. His boat weighs $4\frac{1}{2}$ tons with everything of a permanent nature, and 7 tons with water, fuel, food books. She floated to her marks. He took 2,000 hours, single handed to build her. He advices builders to use two layers for Stem, stern and keel, this gives a much better surface to fasten the planking.

ENGINE IN ONE HULL

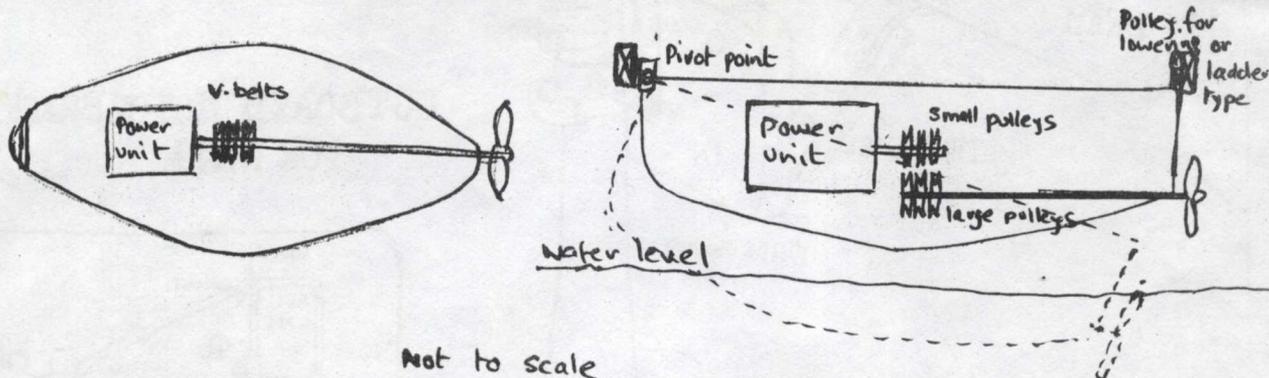
K & A Morcom, RD1 Whitianga, New Zealand - would like to hear from anyone who has tried fitting an auxiliary engine in one hull, driving one hull only. He wants to know how they handle, so does the Editor.....

contd.....

ENGINES

AIR COOLED ENGINE IN POD

Oli Oliver (Maggie Oliver's father) has suggested that a possible solution to the engine problem could be in the use of a hinged pod containing an air cooled automobile engine, using a Fenner Spacesaver drive. The general idea is shown in the sketch below:-

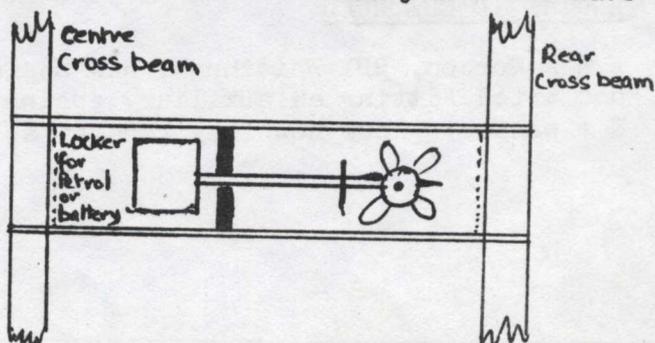
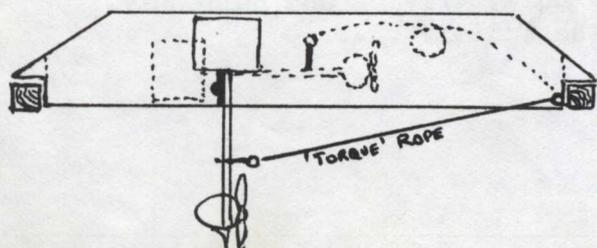


OUTBOARD MOUNTING FOR A HINA

Alan Knightsbridge also uses a Seagull outboard he writes.... "For the first four years my HINA had a variety of outboards mounted on the rear beam. This method has it's drawbacks, to put it mildly, a few being:-

1. The prop is deeply immersed one minute and cavitating the next.
2. The motor cannot be left mounted when sailing - the main sheet gets tangled.
3. Therefore it must be put into one hull out of the way. This effectively precludes using that hull for anything else.
4. Refitting the motor when required, usually in a hurry is both difficult and dangerous in a seaway.

Much frowning and pencil chewing resulted in the method shown in the sketch below. Briefly, an open bottomed lidded box was made to take the motor and fitted between the near and centre crossbeams. When moored or sailing the motor is horizontal and out of sight in the box, held up by a sling under the prop. When needed, the sling is released, the motor drops down and you are ready to start up. When finished with the engine, you pull it up by the torque rope and replace the sling under the prop. This methods lends itself to all of Jim's designs as the torque rope or strut takes the driving strain away from the mounting bracket, so the shaft can be extended to enable the motor to be at deck level while maintaining the correct prop depth. I have used this method over the last two years and have found it excellent in every way.



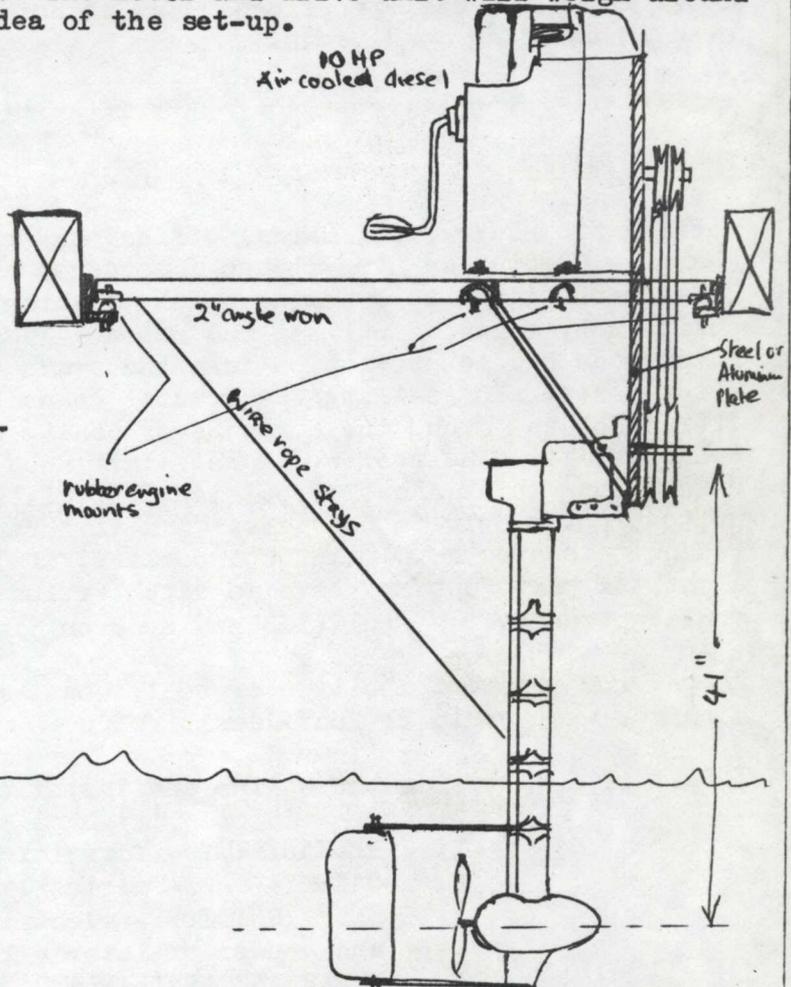
ENGINES contd.....

INBOARD 10 H.P. AIRCOOLED DIESEL FOR NARAI

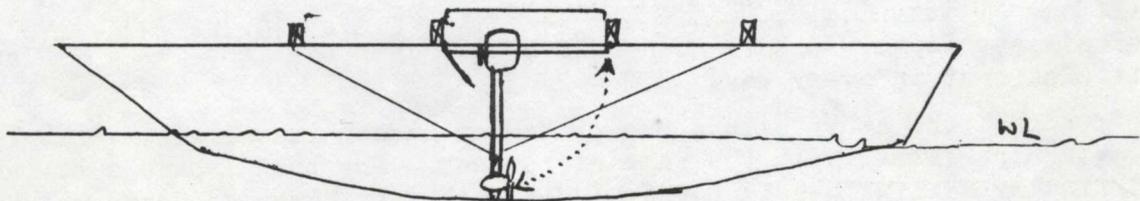
Joe and Jeannie Miller, who should be well on the way to launching their NARAI by now, wrote last year about the problem of auxilliary power. They are thinking about an extended version (41" shaft to shaft) of the Ocean outdrive unit mounted below the deck, driven through V-belts by an air cooled diesel engine mounted on deck. An R.P.M. reduction would be incorporated in the belt drive in addition to the 1: 1.6 reduction in the outdrive. The motor and drive unit will weigh around 200 lbs. The sketch below gives an idea of the set-up.

Bob Evans was consulted about this system and he said that the engine suggested (a Farymann 10 h.p. diesel) should be suitable but Ocean Outboards Ltd, Southport Lancs, England would have to specify the right prop to absorb 10 B.H.P at 5-7 knots forward speed.

The belt power transmission manufacturer would then have to be asked to specify the belt capable of transmitting at 15 B.H.P. (50% safety factor) to get the correct R.P.m.s for the prop from the given shaft revolution. Toothed belts are recommended.



Ronald de Boer, Groningen, Netherlands, writes:- "Because people have found out that the most backward beam is not the best place for an outboard engine, even a long shaft is not long enough there, our latest idea is to use an outboard engine with an extra long shaft, which must be supported by wires in the middle of the boat.



contd..... ENGINES

STANDARD OUTBOARD ARRANGEMENT FOR A HINA IN AUSTRALIA

P.Sorgdrager of 19 Jillico Ave, Tallangatta Vic, 3700, Australia, writes that he has an old but sound longshaft 4 h.p. Seagull as an auxiliary motor. It is stowed in one of the hulls forward of the hatch. In use it operates on a centrally mounted bracket on the rear beam as per design. The Seagull doesn't swivel steer anymore, it is bolted up. It's tiller is removed and the throttle control mounted on top of the carburettor. But it can still swing up out of the water. The motor moves the cat effortlessly but is not used often, as the boat sails so well even in thosting conditions.

THE ULTIMATE?

Ernald Pearson

Writing from Ferryside, Carms, Sth Wales, Ernald says..." I sail a cruising Narai - Cheetah by name. When I acquired her she was fitted with two outboards. These were fitted to swinging brackets which could be lowered and held in position by means of pulleys and ropes. In use these proved unreliable, as the motor pods had no protection from the swash coming through between the hulls and after a season of sailing the Bristol Channell from Gloucester to Milford Haven, Ilfracombe and along the North Devon coast, with engines which continually spluttered to a halt or would not start when required I felt the time had come to have a long think about propulsion, especially as at times I have the safety of up to eight people to consider. I sail for pleasure and charter for business (when it is around). Time is important, if I miss a tide it is 12 hours lost to a charter party who may have to catch trains etc, where a little squirt of power could get us over a foul tide and home on time.

Forget for a moment the type of boat, cost, installation problems etc, and consider what would be your ideal.

I felt if I could find an engine and installation which would give me:-

1. RELIABILITY - first time start guaranteed.
2. SAFETY - virtually a non-inflammable fuel.
3. SELF-IGNITION - electrics and sea water do not mix and sooner or later will let you down.
4. CHEAP AND AVAILABLE
FUEL - at 10p a gallon I love diesel available from building sites, central-heating tanks etc.,
5. FULLY RETRACTABLE PROP - no drag.
6. SPEED - depends on engine and boat, 12 h.p. maximum
6, cruise 5 knots.
7. WEIGHT AMIDSHIPS
8. EASY ACCESS - to all engine parts without clambering in the bilges.

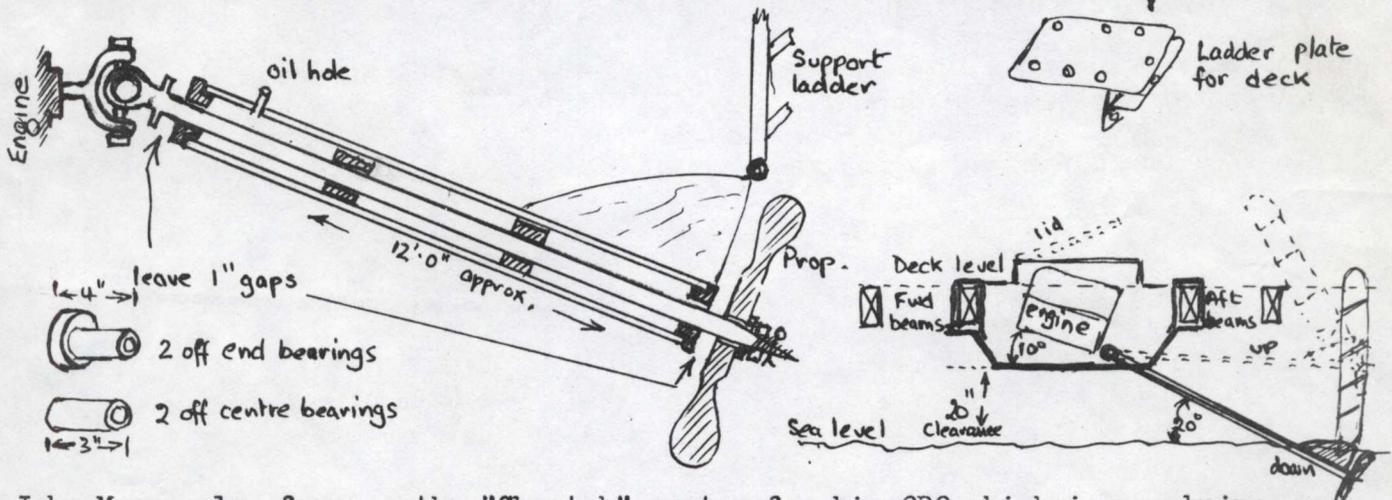
I have found all the above with a 8 h.p. Yanmar diesel installation. In 1973 I fitted a 12 h.p. Yanmar with the same stern gear. Now that I have a reliable motor I find my sailing has improved; I now sail into harbours, onto moorings, knowing that if I need power it is there. Whereas before, I was starting the outboards two miles out to sea to ensure they would start and, if not, entering strange harbours, filled me with the dread of becoming a spectacle with the comment "Another of those cats with an idiot crew!"

THE ULTIMATE contd...

Having acquired an engine, how to get the drive to the water? I decided the maximum drive angle to be 20°, so I started from the wrong end - established where the prop should be - drew a line at 20° which put the engine just forward of the centre of the boat. By mounting the engine at 10° and using a second-hand Hardy Spicer from a car prop-shaft fitted onto the gear box output shaft, with the drive-shaft (12 ft, long approximately) and prop I now had drive. To support the shaft (1" dia. bright drawn bar) I used 1 3/4" inside dia. galvanized water pipe and P.T.F.E. bearings (4 fitted every 3 feet) welded a cavitation plate, off which I fitted the lifting and support ladder arrangement. This enabled me to raise or lower the prop and also gave me a boarding and swimming ladder. The steel ladder with 1" dia. rungs was made to fit into a plate with a slot at deck level and this holds the prop in position. The rungs at the top can be so arranged that the lowest part of prop assembly is never lower than the line of the hulls and therefore there is no danger of damage when grounding. In the raised position the whole assembly is clear of the water.

It is an easy job to box-in the engine with a lifting lid on the top. This is 6 to 8 inches above deck level, makes a good seat, and is handy to stand on to reef or gather the main onto the boom.

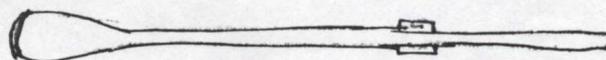
Although the prop assembly sounds complicated, it is as simple as I could make it and relatively cheap to make up. All materials used can be found in a good junk yard, except the P.T.F.E. bearings, and cost £5. The P.T.F.E. was then turned to suit the inside diameter of the pipe, allowing 3 thou, clearance between shaft and bearing. I was able to make up all the stern gear for approximately £18. Only you know what you have to spend on an engine, be it new, second-hand, re-conditioned, diesel or petrol. Be sure you can hand-start it.



John Moore also favours the "Cheetah" system for his ORO which is now being built. He considers outboards suitable for the smaller cats but for Narai's upwards a more 'solid' installation is essential. Alternate swamping and then lack of water for the propeller are the problems of outboards. He is thinking of buying a second-hand air cooled diesel from a dumper truck. These are usually from 10 to 14 h.p. with twin cylinders and are hand started. He likes diesel because it is in line with his and his wife's concept of simplicity, which includes the use of paraffin for lighting and cooking.

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OR □ □ □ □



OARS?