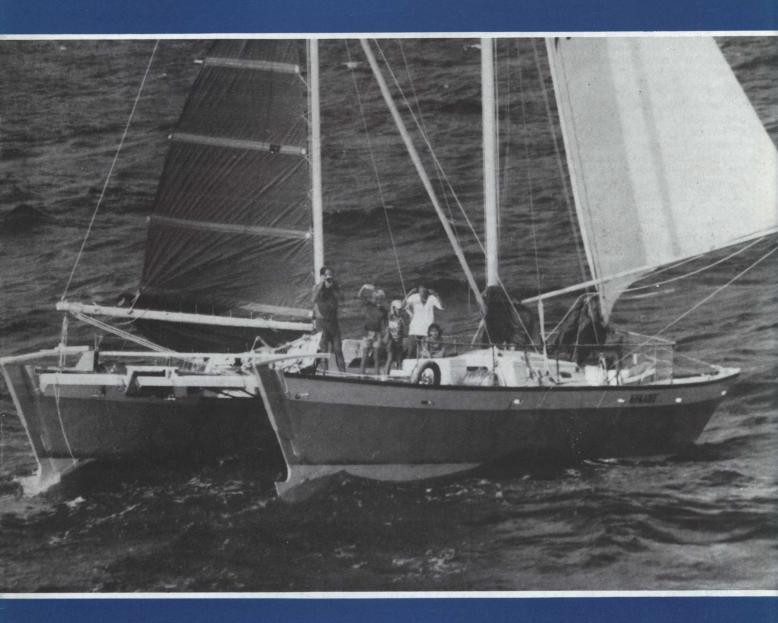
The Sea People SAILORMAN





No. 15

May 1991

Colum.

Once again I am in the same situation that I have been in many times before, and which I/we advise all fellow builders not to get into.

I no longer want to pace myself out in the building of the 63 foot GAIA, working on it when there is time and allocating surplus money (when it's there) to its construction and fitting out.

I/we want to sail, **now**, this year. Everything else, apart from getting the boat sailing, seems a waste of time and "Hang the expense — borrow the money, we must be sailing soon". "So, what's new?" hundreds of Wharram builders will say: "Join the club, James!"

I have been accused and, conversely, been congratulated by different people, of being an incurable romantic. Personally, I think that I am very practical. I see the society and Western world collapsing around us. For the lucky, in the yuppie years (i.e. up to the late 1980s) money, profits, expansion, seemed never-ending. This concept of ever increasing wealth and the maximum personal display of it, played a large part in the design/styling of the large numbers of now unsaleable yachts in our expensive marinas.

We want to be sailing soon, before the collapse accelerates. By collapse I mean things like the Red Sea being no place for a small boat now; or a recent chartlet, sent from Indonesia, showing the Philippines with the areas 'green shaded' where piracy exists; government bureaucracy in the E.E.C. making it more and more difficult for a simple life, offshore living, so on and so on... I want the pleasure of a nonacquisitive lifestyle, a lifestyle based on nature's beauty, with a simplicity based on the minimum of "Bullshit" and I want to have this before the world gets in an increasing mess that will prevent us having that simple choice.

Just now in this column, I used the word "Bullshit". Some of my third world conscious friends could say that the whole concept, to the millions of starving, homeless, clothes-less third world people, is a selfish deceptive Western world romantic dream.

Our boats are built of wood often hardwoods from decreasing tropical forests, (although we, ourselves, are now mainly using temperate climate hardwoods). They are fastened together with petroleum derivatives, i.e. epoxies, sails, ropes and paints. What to us, even with our ecological approach to design, may seem a simple construction compared to other modern yuppy-style yachts, it still represents a net drain of the world's overall resource available to the ever increasing third world millions, and equally, but less obviously, to the wealthy West.

Immediate logic might suggest that we have no right to our romantic dreams, and should stay at home twiddling our thumbs or contemplating our navels to avoid environmental waste. However, it is ideas/concepts that are a major part of the world's environmental/political problems. It's the 'show-off', energy-wasting, affluence concept, spreading all over the world, that has tipped the balance against the planet's natural recovery processes.

By building our simple-style boats we extract less of the world's resources, and by leading our simple lifestyle we establish a concept of true living wants, and support the many other 'green' groups that are trying to reverse the tide of 'earth resource wasting' that has devastated our planet.

So, when you look at your heap of ply, timber, epoxy resins, coils of synthetic rope etc., before actually starting to build your boat, look again, with a worshipping attitude giving reverence and appreciation, remembering that the world resources will be, at this time, a little less because of your dream. With that thought, give of the best of your labour and love to make the boat worthy.

Then, when built, the boat will represent a practical concept that can be of value to the many people who are looking for ideas and examples to quote against the 'show-off', affluent, ecologically destructive and wasteful world.



Photo: James Wharram Designs

Painting completed the GAIA is moved out of the longhouse. Manpower and a "Jockey" winch supplied the power. Cut lengths of scaffolding pipe where used as rollers under the cradle.

The Sea People



The Magazine of the Polynesian Catamaran Association

contents:

Ocean Cruising

4 **Exercise Tiki Transatlantic** by Bob Beggs

The morning Peregrine visited Hell? 8 by Glen Tieman

9 First gale by John Heath

Pyxis meets her worst storm 11 by John Bellanger

What's New!? 22

Tiki 26 modifications by Bob Goode

Re-fitting IKA ROA by Heather Whelan 23

NEWS FROM SEA PEOPLE

Tiki 21 and Capsize

29

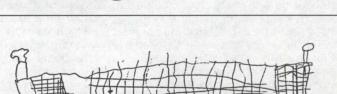
Coastal Trekking

12 A HITIA 17 cruise - 750 miles by Pierre La Plante

Is this St. Ives?? 14 by John Head

U.K. Summer Meeting

32



Seamanship

Multihull Safety by Harold Goddard

Anchoring and mooring 20 Part 1

16



The Sea People has been edited by André Viljoen with assistance of Anne Kennedy

Editorial Address

40 Silvester Road **East Dulwich** London SE22 9PB UK

COVER PHOTOGRAPH:

Harold Goddard's ORO KISKADEE

Secretarial address

Chards Orchard Exeter Road Kennford **Devon EX6 7TJ** UK

Chairman

: Steve Turner

Secretary

Chris Sands

Treasurer

Mike Wynn

1991 by Sea People/Sailorman

Ocean Cruising



Here it is, Bob and Dan Beggs account of the first TIKI 26 transatlantic.

During the P.C.A. A.G.M. Bob described what it was like sailing across the Bay of Biscay, fully reefed at 8 knots, hard on the wind during a gale. Walls of spray flew up from each hull. Initially when Bob went below to rest, as each wave struck the boat he would yell to Dan, "Are you there?". Dan replied "Shut up and go to sleep".

CREW MEMBERS:

Skipper - Bdr Bob Beggs -

7 (Sphinx) Commando Battery Royal Artillery

Mate - Mr. Dan Beggs Yacht - TIKI 26 Catamaran

BACKGROUND

In 1985/86 I completed a six month tour of Belize. Whilst there I had freighted out a 10 foot sailing dinghy, which I used during my spare time to explore the Cayes of Belize. I realised at the time, that a Catamaran was ideally suited to the flat shallow waters amongst the Reefs and Cayes.

The following year I was a crew member on Leg 10 of Exercise CARIBBEAN BARBARA in which we sailed St. Barbara IV, a 39 foot Camper Nicholson Yacht, from Norfork Virginia USA to Gosport, England. During this trip I decided that one day I would skipper my own boat across the Atlantic.

In January 1990 I was posted to 7 (Sphinx) Cdo Bty RA, who were to embark on a 6 month tour of Belize in March. I applied for permission to sail my own boat, a TIKI 26 Catamaran, to Belize where she could be used subsequently as an adventurous training asset throughout the six month tour. After I had been given the go ahead, I asked my younger brother Danny to assist me in the transatlantic delivery.

Danny's sailing experience so far had been a single sailing holiday to La Coruna, Spain, but he had qualified as a RYA competent crew.

I planned to use a sextent for the navigation, and the Transatlantic crossing would go a long way to helping me qualify for my RYA Yachtmaster Ocean.

PLYMOUTH TO LA CORUNNA (8-15 MARCH)

We departed Plymouth at 1530 hrs on 8 March heading SW into a force 5-6 wind. It took forty hours to cross the English Channel and round Ushant into the Bay of Biscay beating all the way. The Bay of Biscay is not one of the best places to be this early in the year, and was to be the first real shake down of the yacht and crew. The wind continued from the SW force 5-6. The watches were 4 hours

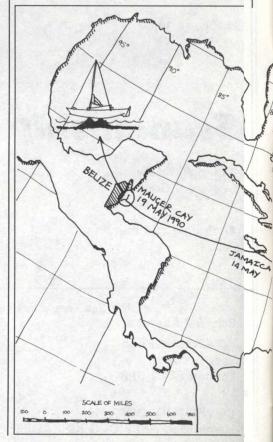
on, 4 hours off and were cold and wet this early in the voyage. However, we were visited by dolphins frequently during the day, and occasionally at night; they played in the twin bow waves for up to an hour each time. On the fourth day the wind disappeared altogether so we started the 4hp outboard engine giving us 5 1/2 knots and motored for about 12 hours. The motor was then switched off to conserve fuel and we sat motionless for about 8 hours. The wind started to blow again from the SW. The 0033 hours BBC weather forecast gave warning of gale force eight imminent for the Bay of Biscay, within 10 minutes we were fully reefed and yet we were still able to do 8 knots hard on the wind in a tremendously confused sea with the wind gusting up to force 9. It was now that we discovered our few leaks. Luckily they were all above the waterline, along the deck, and coachroof joins, however it was enough to soak our sleeping bags, clothes and several books and charts. The gale blew for 16 hours and left a swell of about 25 foot, and it was now time to pump out the bow holds which were by then half full of sea water. Whilst Danny was pumping out the holds a large Soviet Freighter approached to within 100m and stopped his engines. We talked on the VHF radio. He was concerned that we may have sustained damage in the gale, I told him were were fine and asked him for an accurate position to check my dead reckoning. The sun had not appeared since leaving Plymouth thus I had been unable to obtain a sun sight. His Sat Nav position differed from mine by 20 miles, I was pleased with such a small error. The Soviet Ship steamed away wishing us good luck.

The night before our first landfall was spent busily picking our way through Spanish fishing fleets. Having safely passed through the shipping lanes Danny noticed a huge container ship apparently heading directly towards us. I changed course and so too did the ship, we were now directly on a collision course. However, we were still approximately a mile apart, so I called the vessel on the VHF radio hoping to establish his intentions. I called several times but received no reply. By now the gap had narrowed to half a mile and I fired off two white

flares to attract attention and again took avoiding action. Eventually we passed within 100 metres of each other. TIKI bobbed up and down in the wash. It seemed that the container ship had neither seen my lights nor the flares that I had fired. In fact they didn't appear to be manning their radio or the radar. On the 15 March just after midday we arrived at La Coruna on the NW corner of Spain. The first leg was now complete after seven days at sea, and 480 sea miles lay behind us. Perhaps now the weather would improve and we might glimpse the sun to aid our navigation. We stayed in La Coruna for just 48 hours; enough time to catch up on some sleep, load with fresh food and water, and dry out our clothes.

LA CORUNA TO PORTO SANTO (17 MARCH TO 25 MARCH)

We set sail from La Coruna at 1530 hours and no sooner had we left the harbour the wind disappeared and the engine had to be started, and kept running for 24 hours. We motored well clear of Cape Finisterre, and on down the Atlantic coast of North West Spain. Over the next few days the pattern of weather repeated itself time and again; periods of SW wind, force 4-6, followed by calms lasting sometimes for up to 5-6 hours. During the calms we motored, and soon used up our small supply of fuel, except for the emergency reserve. Eventually the



wind settled from the East, however it soon blew at gale force, and the waves increased in height to about 35 feet. We were soon surfing down them at speeds in excess of 15 knots. The waves began to break along their tops, causing the cockpit to fill with swirling white water on several occasions, but this quickly drained out through the outboard well. As we approached the Madeira Archipelago, the weather seemed to deteriorate further, so we ran before the wind, heading for a small island called Porto Santo. As we approached our haven the huge Atlantic rollers were running up against the shoaling sea bed, this forced the sea to heap up, and toss TIKI around at some very alarming angles. This exaggerated movement caused two of the rope lashings which bind the beams and hulls together to loosen, allowing movement between them, this then caused some minor damage. We just managed to slip into port before last light. The damage to the cockpit seats and beam mounting blocks was however minor and easily repairable once in harbour. The 760 miles from La Coruna to Porto Santo had taken 8 days which included an accumulation of 3 days without wind. This first night in Porto Santo was spent fending TIKI off the harbour wall as a full gale was now blowing,

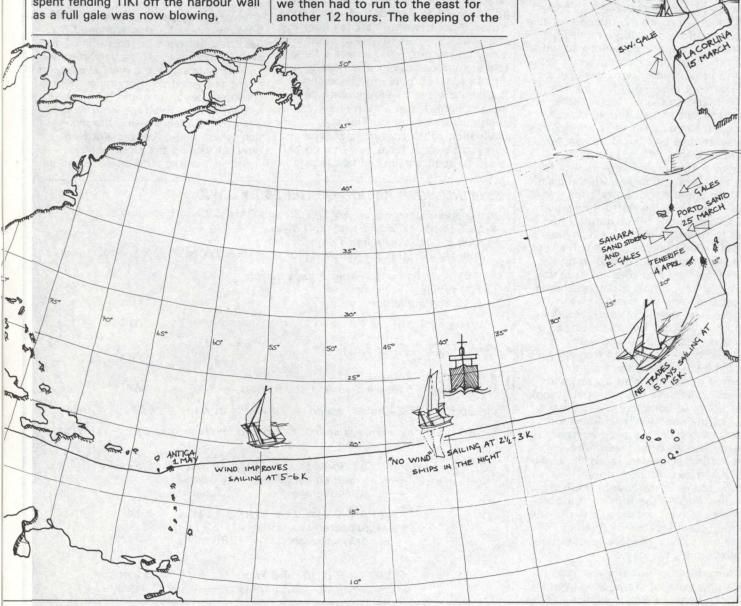
pushing us hard against the concrete dockside. The next afternoon after a well earned sleep we beached TIKI on a small beach inside the new man made harbour. This then gave access to TIKI's bottom below the waterline so we could scrub off the weed and barnacles. The remainder of our stay in Porto Santo was spent buying food and stores, drying out our wet clothes and sleeping bags and completing several small repairs. We also replaced several of the rope lashings that bind the hulls together.

PORTO SANTO TO TENERIFE (1 APRIL TO 3 APRIL)

We sailed out of the harbour at 0230 hours as the wind had just changed in our favour. We approached Madeira shortly after first light and were well past it by mid morning. The progress to the South was good and speeds of 12-16 knots were becoming common, even the sun had come out! After midday the wind had swung round to the east bringing with it a sand storm from the Sahara. Within a few hours the sea was breaking over the boat, so we had to run downwind to the west, heading away from our destination for 12 hours. Eventually the wind came round a full circle and we then had to run to the east for

log and the navigation at this stage became very sporadic, with the wind now coming from the east at gale force. I changed my destination from Las Palma to Tenerife. Late in the afternoon of 3 April we spotted the snow covered slopes of Mount Teide on the horizon. By now the rope lashings which bind the hulls and crossbeams together were showing signs of wear and had to be replaced at sea as we approached Santa Cruz de Tenerife.

By 0130 hours we were nestled in amongst the fishing boats in the harbour, 1500 miles of islands hopping complete and the Atlantic challenge now lay ahead.



TENERIFE TO ANTIGUA (10 APRIL TO 1 MAY)

MY first estimate of a 2-3 day turnaround was 100% out. The amount of work to be carried out was daunting. Several repairs were required to the sails and one of the hull lashing blocks had to be removed and a complete new one manufactured and refitted. We restowed all our gear and took on enough water and rations for four weeks sailing. The engine was stripped down and overhauled. Also some electrical work was required on the radio direction finder as sea water had found its way inside, corroding some of the terminals. Seven full days work was required before I was happy to depart on the Trans-Atlantic journey. Whilst in Tenerife we were advised by many of our new friends to delay our departure until August as the trade winds had stopped blowing, and we were warned to be prepared for a six to eight week crossing as the winds would now be light and flukey. But I didn't think the Army would be too happy if we stayed in Tenerife for five months waiting for the Trade Winds to return! On the 10 April they did return, blowing from the NE. We left Tenerife under motor and soon we were surfing along at 15 knots. In the first 24 hours we covered just under 190 miles, this pace continued for five days therefore covering almost 900 miles. I did some calculations to work out how long the crossing would take at the present rate; two weeks if the Trades kept blowing. Alas the Ham radio Maritime Mobile Net weather forecast told us that the wind was about to run out. On the sixth day out the wind died and our daily average dropped to just 60 miles a day. However conditions were perfect for the taking of sun sights, so the plastic sextant came out of its box for the first time. Now the Astro-Navigation could not be put off anymore. I had two to three weeks to learn the art and if I didn't succeed... well if I kept heading West I was bound to hit the Americas! The first attempt at astro was a failure, it had taken two hours to produce and the position was hundreds of miles out, so I reworked the figures. After two more attempts I found a position that was within a hundred miles of where I thought I should be. The next days sight seemed easier and also agreed with the previous days fix, and it only took four hours to complete. As the days passed my confidence in Astro Nav grew, so too did the accuracy and speed. The weather was improving. The further south we sailed the higher the sun rose each day, noon temperatures were now in the high nineties making the four on, four off watches almost unbearable in the midday sun. Because of the lack of wind our daily average was now down to sixty miles per day.

Since leaving Tenerife we hadn't seen any signs of life at all. There were no ships, aircraft, whales,

dolphins or birds, even the fish were not biting. It was as if we were on a desert of water. The slow progress to the west continued for about five days. I re-worked our ETA for Antigua and at our present rate it would take a further three weeks at this slow speed. It was now clear that we would have to start rationing our food and water and hopefully we would catch some fish to supplement our diet, and collect some water when it rained. The slow progress made the days drag. In the evenings we would listen to the ham radio and yachts which were reporting in from various positions across the Atlantic. They were all saying the same thing "no wind". The big boats with large fuel tanks were motoring trying to increase their daily average. However, we were stuck with a miserly 21/2 to 3 knots. One evening at approximately the half way point Danny was on watch when he woke me saying that there was a large vessel approaching from astern. I wanted to talk to the ship on the Channel Sixteen which is the VHF international distress frequency so that I could obtain an accurate position to check against my astro nav which was up to now unproven. I called the ship on the radio, there was no reply, so I decided to wait until it was a little closer. About twenty minutes later the ship was approximately 300 metres away on my port side. It was a large tanker that looked gigantic next to my small yacht, its powerful decklights flooding the sea all around with brilliant light. I was sure he must have seen me. At this range TIKI's navigation lights are unmistakeable even so he must have seen me on his radar on such a calm flat sea. I called

on the VHF again, no reply. I called again and again, still no answer, so I checked my radio and its antenna and finally changed to the second battery, and yet he still didn't answer. I shone a powerful light at the ships bridge to attract his attention but the big oil tanker just sailed on by, as if we didn't even exist. Afterwards I couldn't stop thinking about the encounter, many small yachts that are shorthanded tend not to keep watch at night when they are far out on the ocean and clear of the shipping lanes. That is the only way that singlehanded yachtmen can sleep, but some skippers who have crews, ignore the danger and leave their automatic pilots and self steering gear to keep them on course during the night wilst they doze. If we had used this system onboard TIKI it's possible we could have been run down by the huge tanker and nobody would have known. Who knows how many small yachts and boats have disappeared this way.

The next day was uneventful, however that evening whilst I was on watch there was an uncanny re-run of the previous nights visit, a ship approached from astern and passed on my starboard side at approximately half a mile, again passing by without answering my call. I began to wonder whether my radio was working. The next day the wind began to fill in, the speed now increased to between five and six knots giving a daily average of about one hundred thirty miles. Sea creatures began to show themselves. Marlin, four to five feet long, would jump into the air chasing the flying fish which were ever present from now on. During the night several flying fish would land on deck and on

took 8 days, including 3 days of calms approx. 24-30 hours under motor at 5-51/2 knots = approx. 140 miles 760 - 140m = 620m in 5 days sailing 124m/day 5.16 knots average WLL Water length = 22'6" speed = 1.1WLL = 4.74 knots • Tenerife - Antigua fully laden. tradewind surfing at 15 knots = 3.16 WLL 190 miles in 24 hours. speed = 7.92 knts average = 1.67 WLL WLL 180 m/day over 5 days speed = 7.5 knts average = 1.58 1.67 WLL for TIKI 36 (WLL = 31ft) WLL = 5.57expected speed 9.3 knots

SPEED/LENGTH RATIOS OF TIKI 26 BY J.W.D.

daily average

daily average

WLL

1.58

for PAHI 63 (WLL = 51ft)

expected speed

TIKI 36 8.8 knots

PAHI 63 11.28 knots

also a speed comparison for TIKI 36 and PAHI 63.

La Coruna – Porto Santo 760 miles

211 m/day

271 m/day

WLL = 7.14

223 miles

11.92 knots

286 miles



TIKI 26 and SUILVEN (Dave Skelhan) sailing in Plymouth Sound 1989

Photo: S. Turner

one occasion hitting me on the back of the head. On the twenty first day after leaving Tenerife the rationing was becoming severe. We had run out of tea, coffee, and powdered milk, the only drink available now was warm water, and only a gallon at that. The food was down to five tins of pilchards in tomato sauce and a handful of rice. However my astro nav (still unproven) gave me an ETA at Antigua sometime in the evening. I had just taken over the helm, the figures from my last sun sight still going around my head when I realised I hadn't added the last 24 hours ocean current to my calculations, I did the sum in my head and worked out that Antigua should just be visible, so I looked up towards the bow unconvinced but there it was, low on the horizon, land. I looked away and waited for five minutes as I had been fooled by a low cloud before, when I looked again there was no mistaking it this time. The rationing was almost over. I looked forward to a long cool drink and a cold shower; three weeks of washing in sea water had left us extremely smelly and salty. After two more hours sailing we could make out the features on the land before us through our binoculars. It was approaching dusk and the light was fading, and as I only had a small scale chart of Antigua I decided to approach cautiously and anchor off for the night. I spotted some yachts in a harbour or inlet ahead and made the anchor ready. I continued on aware that something wasn't quite right then I realised what it was, the masts of the yachts ahead were not swinging as they should be in the swell. Then it struck me there must be a sandbar or a reef ahead. Suddenly there was a small scraping noise on the keel. I immediately threw the anchor over the side and TIKI came to a halt. We were

eight hundred and fifty miles since leaving Tenerife twenty one days earlier.

A second anchor was laid out, and I inspected the bilges to ensure we weren't taking in water after lightly touching the bottom. The bilges were bone dry, so we set about tidying up and packing the sails away. Once we were ship shape, the rubber dinghy was inflated. The wind was strong and the nearest landing place directly downwind, which would have made our return to TIKI difficult so we decided to visit a large yacht nearby. Armed with out tins of pilchards we paddled the dinghy across to barter for some milk and coffee. The French skipper of the yacht asked where we had come from. When I told him Tenerife he invited us onboard, and he and his crew threw a party to welcome Danny and I to Antigua. We returned to TIKI in the early hours of the morning, and slept our first unbroken sleep in twenty one days. The next day we sailed to English Harbour where we would be able to carry out maintenance and repairs and also stock up with fresh rations and water. I had believed that I could purchase charts of Belize in St. Johns, the capital, however, the chart shop had none in stock. I was dismayed to find that I would have to wait three weeks, unless I was prepared to pay an unbelieveable amount of money to have one flown in from the USA, and it could still take over a week to arrive. I couldn't wait that long, so I set off in a boat to boat search trying to find someone who may have been in the Belize area, who might have charts and consider selling them to me.

After three days searching I managed to find some large scale charts of the Western Caribbean, and a faded photocopy of a map of Belize, showing the main Cayes and some of

the reefs. I certainly didn't have enough information to make a night time approach and even a daylight entry would have to be in good weather and light conditions. I decided that I would have to stop off at either Jamaica or Swan Island which were both directly en route and a good deal closer to Belize, and hopefully purchase some charts of the Barrier Reef.

However, there was one stroke of good luck. Whilst in English Harbour a passing yachtsman asked if he could look around TIKI, afterwards he asked if he could take her out for as sail as he was considering having one built. The next day we had planned to sail to Falmouth Harbour and anchor there before departing the following morning, so he was invited to join us for the short journey. After the demonstration sail we were presented with a large spinnaker which he had spare on his own yacht; this vastly improved our light weather capability.

ANTIGUA TO JAMAICA (8 MAY TO 13 MAY)

We left Antigua under our new spinnaker pulling away downwind at over ten knots. We soon passed between Montserrat and Nevis. By now the sun was directly overhead at midday making the temperatures soar to the high nineties and occasionally over a hundred degrees fahrenheit. The temperature on deck became unbearable, so we often hung ourselves off the forward crossbeam and dangled in the water to cool off. On one such occasion Danny had just pulled himself back onboard when I noticed immediately behind the stern a large shark about six or seven feet in length. This was the first one we had seen on the journey thus far. It nosed around TIKI for about five minutes

cont. P.16

now anchored inside Nonsuch Bay,

Antigua, having covered two thousand

The morning Peregrine visited Hell

Storms can be as dangerous in harbours as at sea, Glen Tieman explains...

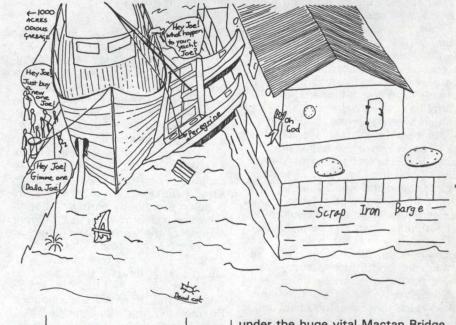
As you can read in the accompanying story, I've had a little set back, but it's interesting seeing the results of such a thorough destruction test. I can find no fault in the design. The crossbeams broke at the inner hullside, wherever the planking was rent apart, the inner structure, bulkheads, stringers, floors, was undamaged except of course where it was completely ripped away.

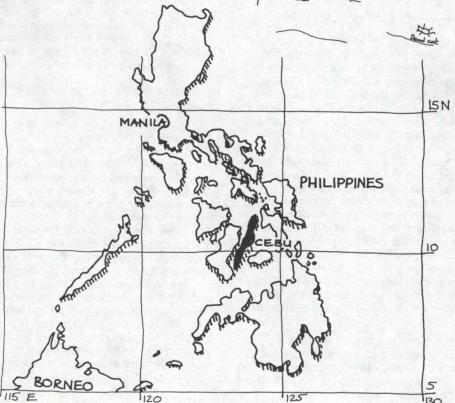
After 7 years of cruising
PEREGRINE (TIKI ROA) met her match
while anchored in the harbor of Cebu
City, Philippines. (Late 1990).
Provisioning for the next passage,
Super Typhoon Ruping, ("Mike"
internationally) made a direct hit. After
the first half of the storm, which
dragged away 5 of the 8 yachts in the
harbor, the wind calmed and shifted
and I thought we had made it.

But it was only the eye passing and just at dawn, the shit really hit the fan. 250 kilometres per hour winds came straight down the harbour. Quickly generating huge breaking surf and an assault of perhaps a dozen dragging ships and barges. Some passed only a couple of feet away, 25 foot high walls of steel with thick black smoke whipping out of the top, full speed ahead, dragging both anchors, and proceeding directly astern. I clung on the deck with

waves breaking over my head watching the mayhem in disbelief. Vessels were smashed on the sea walls three deep. I tried to sweat an anchor line (one of 4 bridle lines) but

could not bend it an inch, it was like steel pipe. Then I realized how helpless I was. A minute later an anchor cleat pulled out along with a piece of the hull, but she was still holding on by the other hull, until the ships caught my anchor lines and away we went. We moved the 100 metres back into the mess of destroyed ships in only seconds. Then just as we smashed up against a tug boat, I watched in dismay as the biggest ship in the harbour came swinging away from the dock, coming straight at me. When all its mooring lines broke it changed course and slid





under the huge vital Mactan Bridge. First its smokestack hit knocking down girders and smashing the stack. Then the electronics struck and a shower of sparks rained down. Finally one of the loading towers crashed over to a 45° angle before the ship holed itself on the concrete foundation tower. Meanwhile I climbed onto a tug boat, then onto a barge loaded with scrap iron behind which 20 or 30 seamen were huddled with their lifejackets and seabags. Someone gave me a shirt since I brought nothing but my short pants. From this comparative shelter I watched Peregrine hammered for hours against a 15 foot wide gap between 2 ships, until her stern went under one ship and her bow over the steel corner of the grounded barge. The ship over her stern smashed down on her furiously hundreds of times until the last six feet of one hull floated up free on the other side of the ship with 14 of the aft netting beam attached. As the

hulls where wrenched mercilessly the beamshelf locking blocks were ripped apart and a great bite was eaten out of the keel by the barges corner.

On shore hundreds of people were killed, houses and schools looked like they'd been bombed and hundreds of power poles were broken in half. A car parked on the wharf was blown sideways into a ditch. Over 50 vessels were sunk in the harbour including four navy ships at the dock.

The shore where Peregrine was stuffed is a garbage heap alongside hundreds of acres of desperate squatters. So the immediate job was to salvage even before the storm was over. The very strong temptation then was to walk away and leave the remains to the squatters, to patch their cardboard houses with. It took a lot of soul searching and the urging of many friends to even consider facing the responsibility of re-building. Enlisted by my rum supply, the seamen helped heave my former home back into the sea where by virtue of careful weight distribution, she required bailing out only 5 or 6 times per day. After many other adventures I got Peregrine towed to a nearby beach town where I'm rebuilding her in the backyard of a good friend. Coming into the beach the ruined hull sank in the surf at low tide, so the only recourse was to disassemble her then and there, letting the stripped hulls lie on their sides while pulling her piece by piece above the high water

Now many scarfs and many butt blocks later, Peregrine is coming back together with encouraging speed and there is no doubt that she will be wandering again within a couple of months. Although it is a big job, at least it is possible here unlike most of the other places I've gone where there are no supplies. In spite of the material loss it was a morning I would not have wanted to miss. The inhuman power of all that happened impressed me as if I'd witnessed the fabric of reality ripped to bits.



Along with this article Glen sent a brief description to J.W.D., of the kind of catamaran he would next like to build:

"Something like a PAHI 34 – 38 in the same minimum style as TIKI – ROA, but with a cockpit in each hull, no standing headroom except maybe a 'Poptop'. No deck pod. Ultra light and low."

First Gale

by JOHN HEATH

This is not a story of horrendous gales but of two people in the first gale of their sailing career that in total amounted to two weeks sail training, 2 weeks in the Northern Sporades and one short summer season in the Thames Estuary on their newly launched TANGAROA MKIV.

We had sailed out from England (Sea People No. 5) and it was our first night in the Mediterranean having left Sete that afternoon. At last we were in the Mediterranean. All that work and worry and money had come to fruition. We sat at the helm talking quietly, Yin Yang was beam reaching at about 5-6 knots under a beautiful night sky, numberless stars, a warm Southerly. It was one o'clock in the morning and we felt very good. Before one of us slept we thought we should reduce sail a little. I went forward to take in the staysail. Whilst doing so I became aware that the wind was freshening and we thought it would be wise to reduce sail further. In fact the sail reduction didn't stop. The wind increased and went right around to the North. At 1.00 a.m. we were under plain sail heading eastwards, at 1.20 a.m.we were under bare poles, at 1.30 a.m. we were running south before a full blow Mistral.

I have here to admit to a very strange reaction that I have to tension. I find it impossible to stay awake. I may only sleep for 5 minutes but the need to sleep is truly irresistable. Gill was helming and I explained the problem and then curled up more or less where I was and went instantly to sleep. Sometime later I was awoken by Gill saying, "I could do with some human contact John".

I awoke to find the world gone mad. Behind us the lights on the French mainland were rapidly disappearing, around us the sea and wind were roaring and howling and Yin Yang's speed was incredible. I thought cat's didn't leave a wake but there behind us was the broken lines of a wake marking our passage. Well I've read all the right books and I knew that we must slow down. We trail a bight of warp with tyres on it. No problem! Until it is attempted, it is impossible to describe the time and effort it takes to complete a relatively simple task like that. Get the rope out of the locker, tie the lengths together, thread it through the port stern and back to the mizzen mast, thread the tyres on, then other end of warp through the starboard side and back to the mast. Tie the two ends together so that we have a huge rope circle about the mast. The rest is in the aft net. Meanwhile Gill is complaining that she has trouble steering because the rudders are often almost completely out of the water.

All the preparation is now ready, I am in the aft net, sometimes up to my knees in water (it's warm!) and feed the warps over the stern. They don't need a lot of help, the whole lot has gone in seconds and I throw the tyres after them. The difference it makes to the boat is astonishing. We slow to about 3-4 knots, the seas are now running under us and the rest of the night is spent in alternating at the helm. About a half hour was all we could manage. The combination of tiredness and concentration made it an exhausting process. At about 10 -11.00 a.m the next day it was apparent that the wind was easing and we were able to raise some sail a little later. By 4.00 p.m. we were in a windless calm and unsure of our position. In the warp trailing exercise we had forgotten the trailing log and had lost the lot, therefore no idea of distance run. A passing cargo boat gave us a position and we found we had made about 40 miles in 10 hours under bare poles and trailing warps. Unfortunately it was not in the direction we wanted to go and so we began the slow passage back to France under power.

All the above is not a remarkable story and must have been experienced time and time again. What makes it a little different is that the people involved had no experience of this sort of thing and were sailing the only boat they have ever built. It was, of course, the boat that was experienced. Only 2 things worried us all night. Firstly the Mistral can blow for 3 days and we didn't want to go to Algeria, secondly we had built the boat, we are fallible human beings, did we make any mistakes. Well, I don't think we could have. All night long she simply romped along. Steady platform, only the spray from the following waves on board. We were able to make cups of tea and cut sandwiches with very little trouble. Monohullers will not believe that we can boil a kettle in a gale without fiddle rails. Time and time again we could see an extra large wave bustling up to us and as it got closer it would tower over us and we would think that this is it and each time Yin Yang raised her saucy little arse and let the whole thing run impotently past. It was wonderful.

In conclusion, I don't want ever to be in a gale, but if I am and we have sea room then I don't think I will be too fretful. If I was forced onto another point of sail I think I would feel very differently. Don't knock reading as a way of learning. It's not as good as experience but if you have any sort of memory for what you have read then it's not a bad back up system. We didn't know what to do on this occasion we just did what seemed sensible from our reading. The only thing I would try on a future similar occasion is to have the reefed staysail sheeted down hard so that it is on a fore and aft line. I think this might help in steering the boat directly downwind. The helming really was the worst part of the whole night and anything that would assist that must be to the good. I don't think our Autohelm (bought since these events) would have coped and I understand that windvanes are often of dubious help dead downwind.

As a final word I am sorry that we can't supply wind forces and wave heights etc.

Yin Yang remains an unrepentently simple boat and estimates are sometimes worse than nothing. The seas were pretty high, masses of white water and lots of spray blowing down the fronts of the waves. That's the best I can do. Not a sign of life, no dolphins or whales (they came the next day) only a rescue service helicopter that circled us twice and went away. I suppose we looked OK.



"SLIPPERY SAM" Alan Jenett's TIKI 26 prepared for a blow, Irish Sea 1989 Photo: Imagine Multihulls

IMAGINE MULTIHULLS

TIKIS IN G.R.P. - KIT OR SAILAWAY

PLEASE SEND FOR DETAILS TO OUR NEW ADDRESS



Trevol Business Park Torpoint, Cornwall PL11 2TB (0752)815000

Merv. Crittenden Sillette cat drive leg Suit NARAI or similar 1987, v.g.c. £500

Telephone (0752) 815000

GRP TIKI 26 "Scat" Very full invent £10,000 Paul Ballard

Telephone (0752) 815000

Pyxis meets her worst storm

Our fourth account of heavy weather comes from John Bellanger. John and Diane McCann are well known to P.C.A. members. They built their ORO PYXIS in Canada and have since spent 15 years living and cruising on board PYXIS.

Here in an extract from a letter to J.W.D., they describe their worst storm yet, encountered on a voyage between New Zealand and Tonga.

PYXIS has clocked another few thousand ocean miles, over to Tonga, non stop as was our intention.

The Tasman sea is not a good place to be sailing on in the winter, but Customs were applying pressure so there was no choice. During this slow passage we were overtaken by the mightiest gale (storm?) that we were ever in, including the North Atlantic. Pyxis rode through it with comforting reassurance and with ease and dignity, except for one wave which was upset by a rolling side wave and this swept the decks with several feet of foaming sea, moved a few fuel containers we had lashed to the decks - but passed almost immediately through the slats and out the large scupper holes. It only lasted three days, but it seemed like an

eternity. On hauling in our "Jim Brown" tyre drogue we saw that one of the three stainless steel cables on it was broken, a second was only holding by a few strands! The third and last was quite frayed.

As there was still a lot of wind with fully developed seas — we left only the tiny twin jibs up (4ft luffs and just big enough to reach almost to the beam ends), then we put the Autohelm 3000 on and went to sleep — exhausted.

No one was on watch and we cooked and slept and read and had a "day off". Much to our amazement the next day, we had travelled 180 miles!! Not from noon to noon, but in 24 hours, this with nonchalant and careless ease.

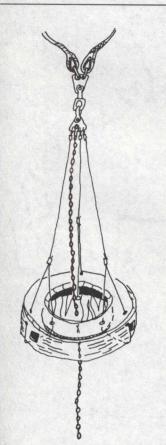
We appreciated that there is a lot "right" about the design — and think — you (James) deserve at least 8 out of 10 marks (and a grateful thank you). Needless to say, we'll repair this trusty old drogue before we travel on, it has served us well, through many a gale.

So we urge you to make one, or what maybe even better, one of the new "serial drogues" with some chain on its tail. These cones can be rip stop nylon of light weight because they are small. Approx 5 inch (12 cm) dia at the mouth, but there should be between 50 and 90 of them.

We intend making one of these because they are light weight, have adjustable holding power and the rope can still be an anchor warp, it would also be compact. The U.S. coastguard have come up with this design. It could also be winched in (holis bolis!!) A friend of ours Mike Bromely in a PAHI 31 made one and used it in a Tasman gale and was most impressed with it.

We have heard of several bad incidents in Multihulls which set large 'chutes from the bows and got side on, because of rudder catching (like throwing a dart backwards!) Despite what has been written, we prefer the insurance of drogues and anchors, rather than the paper kind of insurance!

After about fifteen years of "use and abuse" PYXIS is still a safe and dry and comfortable home.



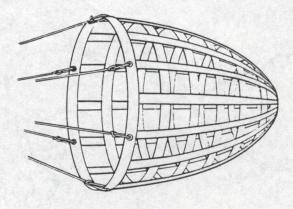
ABOVE: JIM BROWNS TYRE DROGUE FOR BOATS OVER 35' LONG. FROM "THE CASE FOR THE CRUISING TRIMARAN" BY J. BROWN

SEA ANCHORS/ DROGUES

Comments from James Wharram

John Bellanger's Jim Brown drogue/sea anchor worked for many years. It did begin to disintegrate on his stormy voyage from Sydney to Tonga, but whether that was due to the age of the sea anchor or to the intensity of the storms is not fully clear.

I, personally, will not use solid plywood in my tyrebased sea anchor. Instead I use a loose-woven webbing or a heavy rope netting hanging in a loose sockshape like a rod fisherman's scoop net. My reason is that Chinese junks used heavy baskets. One woven socklike sea anchor is on the market (see illustration). I think that allowing some water to flow through the sea anchor will reduce loading and set up a currentlike stream of water through the sea anchor for directional stability.



Storm Survival System

The unique construction of Galerider brings modern fluid dynamics to the ancient art of sea anchors. Deployed over the transom, Galerider is a true drogue that works with the flow of water rather than simply blocking it (as with conventional sea anchors). Galerider's web construction and parabolic design allow tremendous energy dissipation without creating a shock load during sudden acceleration. It assures steady two to three knot boat speed for good steerage control, and eliminates any tendency to surf or broach. Unlike conventional sea anchors. it easy to deploy and retrieve without a trip line. Proven in Force 12 seas! Write or call for full details.

Hathaway, Reiser & Raymond 184 Selleck Street Stamford, C 06902 203/324-9581

Coastal Trekking



A HITIA 17 CRUISE 750 MILES

by PIERRE LA PLANTE

Pierre La Plante and his partner Marie have sent us an account of a coastal trekking "epic".

A journey of 750 miles, during which their HITIA 17 "SKUA" has been used just as intended.

Sailing east from Quebec along the St. Laurence River SKUA has visited beautiful inaccessible country. They sailed during the day and camped at night.

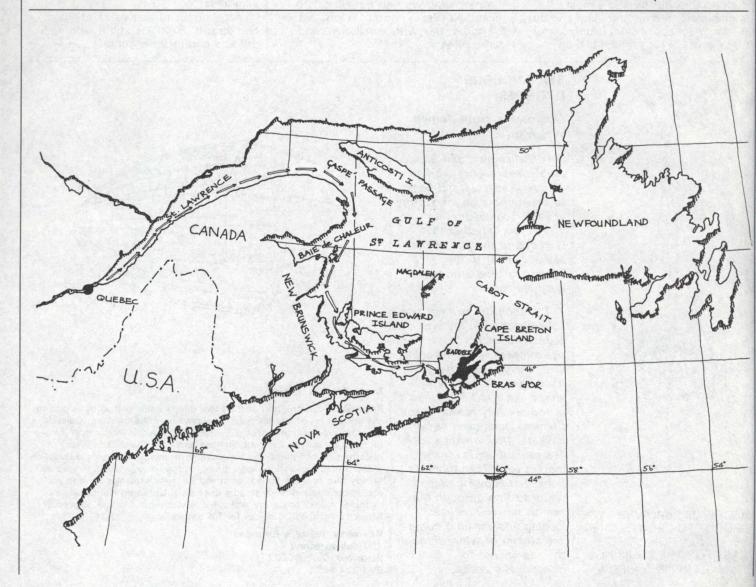
Readers may be interested to know that Frank Dye, the well known dingy cruising sailor (sailed his original 16' foot Wayfarer dinghy 40,000 miles in all, including open sea voyages to Norway and Iceland) has just reached the St. Laurence Seaway. He travelled north up the east coast of the U.S.A. in a new G.R.P. Wayfarer. This summer he will decide whether to travel north to Newfoundland or west and follow a route similar to SKUA's.

The boat took about 8 – 9 months spare time to build, this including the sails, blocks etc. The only item I didn't make was the trampoline. It cost me about \$2.200 Canadian dollars in 1989.

My personal modification was a junk rig instead of the sprit rig. The reasons for this were: (i) sheer curiosity, (ii) reefable in a matter of seconds, (iii) absolute speed control under sail (very useful when beaching the boat), (iv) ease of building, the sail being flat, (v) almost no twist in the upper aft end because of the battens and multi-sheet system, so less weather helm.

I used a long sculling oar for pushing the boat in flat water (long and narrow blade) and this was satisfactory.

Marie and I launched 'SKUA' at the end of May 1990 in Quebec, Canada. After a few hours trials we decided to use the tide to begin the trip, this was to be a two months trip.



The St. Laurence River is still a very wild place to cruise and one has the marvellous feeling of discovery when sailing these waters.

Wildlife is ever present and the presence of whales, even the Blue Whale is a common sight. Sometimes a Fin Whale or a group of white Belougas would make a detour to "game" with us. They are very friendly monsters especially when you are under sail.

Wherever possible we were beaching SKUA, and rigging the "Pop" tent (EUREKA MEADOW TYPE, £300 CA) ashore. If not possible because of rocky shores etc., we then rigged the same tent on the trampoline and became a floating carpet.

So from Quebec city we hugged the coast towards the east with the prevailing westerlies and habitually sailed 2-3 miles offshore, but occasionally had to sail some open stretches.

'Baie des Chaleurs' mouth was a memorable crossing, we had then a force 6 on the beam with steep breaking waves but with no jib set and the mainsail well reefed we were very safe although quite wet and cold.

The only worry then was the hulls slowly filling because of the Hatches system. These should be shut with a water tight, **rigid** hatch, and not with fabric and elastic.

I then very much appreciated the flexability of the beams attachment because with the hulls centres half full, something would have given up otherwise. (The centre portion of each hull has a shallow 'cockpit/store' where one can sit to paddle or store waterpoof gear. It has a wateright floor above the waterline and is designed with drains as I recall. Did SKUA have these drains or were they too small or depressed below the W.L. in heavy weather? Ed.)

The 'New Brunswick' coast was a



PIERRE LA PLANTE HITIA 17 SKUA

Photo: P. La Plante

wonderland for the HITIA; sandy dunes all the way down indented with intricate lagoons where we could over indulge ourselves by deliberately sailing SKUA over shallows spots; a pleasure which previously was condemned to us on our deep keel wooden Folkboat. Sometimes we beached SKUA on tiny isolated islets where flocks of seabirds were nesting, their wild cries, comforting themselves with the tossing of the waves and the howling of the wind, pushing low clouds over our tent.

By then we had a routine well set up and both of us knew what to do in silence. It took us about 2 hours to settle down and 2 more to be ready for sailing. We were sailing generally 7 a.m. to about 4 p.m. and were carrying lunch in thermos flasks plus crunchy stuff at hand. An important detail is to build backrests, otherwise you are so uncomfortable that the day is ruined.

'Bras D' or Lake which is situated in Cap Breton island, north-east of Nova Scotia is a protected lake which continues to 'Breathe' with the ocean. Like an immense Mollusc whose insides you are welcome to visit.

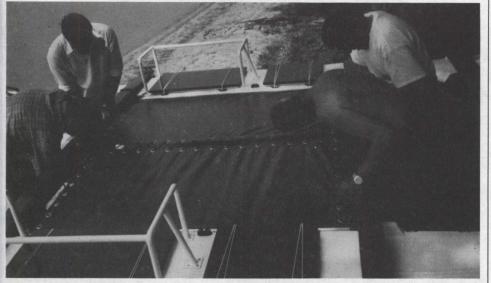
The shores of the lake are rocky and bushy but with persistance you are apt to discover a small sandy beach suitable for your needs.

The trip ended then, at Baddeck, which is a very pretty and friendly place and there equipped with a truck onto which we strapped "SKUA" once dismounted, we headed back home in one day.

We concluded that you can experience a lot of 'Sea Romance' with a HITIA 17 without spending (albeit quite crude) a lot of time and money.

PRACTICAL DETAILS

- a. I would stick to the junk rig, although not efficient to windward by itself, with the jib set matters improve drastically.
- b. To improve cheaply the hatches (to hull cockpit), I have thought to screw plywood panels imbedded in putty and to cut holes the size of commercial bucket mouths; the upper sections of the buckets should be cut away and these can be poprivited in place with plenty of putty; these lids are absolutely watertight.
- I would rig a rigid platform instead of the trampoline, because
 - (i) the strain shown on the fabric when both of us were on it. This made the aft beam tilt forward and thus the beam is out of line with the beam sockets.
 - (ii) camping on the platform will be much more comfortable.
 - (iii) cheaper to build.
- d. Rig anti chafe skids onto the 'V' of the hull.
- e. Use a roller reefing jib.



Backrests and ply hatch covers fitted to T. Bracklows HITIA 17.

Is this St. Ives?

John Heads account of a well planned autumn sail along the Cornish coast on board his HITIA 14.

"St. Ives!! Good heavens no, this is Porthleven. St. Ives is miles away on the North Coast".

The bemused local, leaning on the harbour wall, could hardly get the words out, he was so amazed at our incompetence.

A 14 foot Wharram HITIA catamaran had appeared entering the little fishing harbour of Porthleven one autumn day with two slightly overweight, wet suit clad men onboard who could have been mistaken for two drowned rats, after our seven mile sail along the coast in a force four south west wind.

I had built the HITIA over a fifteen month period from April 1987 to July 1988. (Having previously failed 'O' level woodwork). My sailing friend, Bev, had kept pressing me for a trip along our beloved Cornish coast from Marazion to Porthleven, and we planned it like a mini cruise. Although we were never to be more than a mile and a half off shore, we knew we had a responsibility to our family, ourselves and rescue services.

We sat down one summer's day and decided that provided we had reasonable weather the only suitable day was a Sunday in October, when we would both be free and the tides were right.

Once we had agreed on the date we had to take into account the following:

- We wanted the tidal stream with
- We needed at least half tide at Porthleven because it dries.
- We had to watch for two drying rocks directly on our route.
- The Harbourmaster needed to be approached at Porthleven to discuss the leading marks for entry.
- A launching place had to be found which was of easy access to build and launch.
- 6. Daylight sailing only.

The second Sunday in October fitted the bill. Next we discussed safety under the following headings:

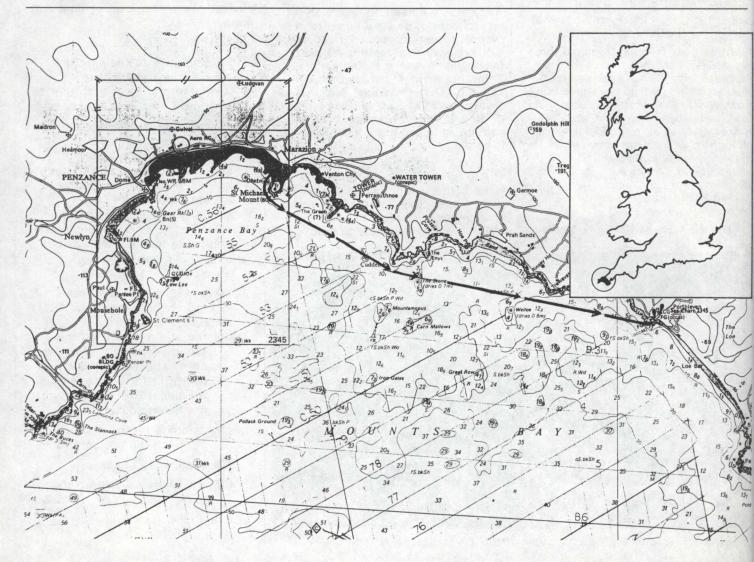
- All rigging both standing and running to be checked and double checked.
- 2. Up-to-date flares on board.
- 3. Lifejackets
- 4. Wet suits (it gets cold in
 - . Hot liquid food the U.K. in October)
- Wives to keep an eye on us from the cliffs en route.

All this planning may seem over the top to many of you but I have done enough sailing to know not to be complacent because that is the very time you get caught out.

The day finally arrived overcast but mild and we drove the two miles from our home to Porthleven where we left one car, and drove my Ford Escort with the HITIA on the roof rack to Marazion.

It took us three quarters of an hour to build our little craft on the flat hard sandy beach under the watchful eye of St. Michaels Mount with its castle on the summit. From AD25, when it was used by Mediterranean Merchants as a base for tin trading, it has a long and interesting history. It is now National Trust property.

We struggled into our wet suits and lifejackets and launched through the surf. As it was only just after low tide, we had to sail to the south of the Mount to avoid the causeway and rocks on the NE side.



As crew, Bev was the first to be soaked followed by inadequately packed sandwiches and finally me, the helmsman.

The swell and frequent white horses made it difficult to drink our soup but we managed. It raised our morale. A Dart catamaran came out to have a look at us but soon turned back to the safety of the beach. The force four wind and grey overcast sky made it a day for keen sailors only and we saw no one else.

Perranuthnoe beach was soon abeam with its supply of shellfish at low water springs, then past Cudden Point to open up Praa Sands and the fine granite house on Rinsey Head. There was enough water over the Stones (dries 0.7m) and Welloe Rock (dries 0.8m) not to worry and Mountamopus rock was well to seaward and not of concern.

We had one knot of tide under us which was a good psychological boost and we were making good progress. I had sailed enough miles in the HITIA to know that she was quite capable of standing up to the sea conditions which we were experiencing and we were enjoying ourselves as we observed the coastline from close in. On the cliffs at Trewarvas stood the old engine sheds from the days of the copper and tin mines — a fine tribute to those who had built them in the last century to survive the atlantic storms.

After just over an hour we sighted the small tidal harbour of Porthleven and following the harbourmaster's instructions, we sailed at great speed between the harbour wall and clocktower to starboard and the old lifeboat station and Deazle rocks to port.



The Hitia 14 with the Head children aboard.

The elation of such a trip brought out the devil in us. "Come on Bev," I said, "let's pretend we are lost and ask the man on the inner harbour wall if this is St. Ives!".

FOOTNOTE

Three months after our voyage, Porthleven became world news during the January 1990 storms with the seas breaking over the clocktower and Photo: J. Head

many thousands of pounds worth of damage being done to the harbour and coastal houses. It is hard to imagine the power of the sea whilst sitting on the harbour wall drinking a pint on a calm summer day, but the January gale reminded me to respect the sea at all times.



BOOKS FOR SALE

James Wharram Designs have the following books for sale, which have all been reviewed in the magazine.

'Seaweed - a User's Guide' by Sonia Surey-Gent and Gordon Morris UK £9.95 - overseas surface mail £10.95

'Psychology of Sailing' by Michael Stadler UK £7.95 - overseas surface mail £8.95

'Cruising with Children' by Gwenda Cornell UK £12.95 – overseas surface mail £13.95

'Instant Wind Forecasting' by Alan Watts UK £5.95 - overseas surface mail £6.95

NEW: 'Appropriate Technology in Catamaran Design and Construction'. A paper, given by James Wharram at the 'European Multihull Symposium' held at Monnickendam, Holland, from 25-27 May, 1988. £2.50

'Encounters with Whales and Dolphins' by Wade Doak

The Sequel to 'Dolphin, Dolphin' with many photographs of encounters all over the world.

UK £14.95 - overseas surface mail £16.45. Airmail extra depending on country.

'Multihulls for Cruising and Racing' by Derek Harvey UK £19.99 – overseas surface mail £20.99

JAMES WHARRAM DESIGNS, GREENBANK ROAD, DEVORAN, TRURO, CORNWALL TR3 6PJ U.K.

NEXT ISSUE OF THE SEA PEOPLE

All's well that ends well... or so they say!

Digressions from an Atlantic crossing (TANGAROA)

'George Lundgaard'

FIREWEED'S British Columbian
Cruise (TANENUI) E. Beard

TIKI 21 Capsize

A. Head

Anchoring & Mooring Part II

TIKI 21 BUILDING

- News from "Live-aboards"
 Tell us how you do it
- Coastal trekkers
 What gear do you carry?

COPY REQUIRED BY SEPTEMBER

whilst Danny and I watched, then lost interest and departed. Needless to say the dipping over the side ceased! The next day Danny spotted a second shark as it was feeding on a bloated carcase of an unrecognizable marine mammal. On the fourth day out of Antigua the water we had taken onboard at English Harbour had become undrinkable. Large brown algae had formed and was even undetered by sterilization tablets! So when we spotted the lights on the Jamaican coast that evening I decided to hove to, and wait until daybreak when we could call into Kingston to re-supply with fresh water, and hopefully purchase a chart of the Belizean Reefs. When we tied alongside in Kingston, I was charged twenty five pounds to cover the costs of customs officers, double time on Sundays. This would prove to be the most expensive five gallons of water I had ever had.

JAMAICA TO SWAN ISLAND (14 MAY TO 17 MAY)

We left Jamaica the very next day, however we hadn't managed to find the charts that we required in Kingston. The Coast Guard had been very helpful, they gave me charts to cover Pedro Bank and Wreck Reef, which proved to be very useful in the dangerous Jamaican waters. Once clear of Wreck Reef we were preparing to hoist the spinnaker when the jib halyard snapped allowing the foresail to drop on to the deck. It had parted at the top of the mast. I would have to go up the mast to repair it, however this would have to wait until the next day as it was now dark. The next morning Danny winched me aloft, due to the choppy conditions I was swinging around so violently, that I had to use both hands to hold on to the mast to steady myself, so therefore I was unable to repair the halvard. I was lowered down determined to try again once the sea conditions moderated. The last chance to acquire more detailed charts of the Barrier Reef would be at Swan Island on the horizon and set a heading to take us there. On the chart that I was using there was no notation to show the nationality of Swan Island. I decided to approach the Islands cautiously due to the topsy turvy nature of the Central American Banana Republics. I had onboard some military hardware, namely a HF radio and morse key, and I didn't fancy ending up in jail as a spy. As we sailed along the coast I studied the land through my binos, and what I saw looked very military and foreboding. There were a vast number of antennae and watch towers, and as I approached a landrover sped down to the landing jetty and fired off several rounds from a shotgun, I decided to give Swan Island a miss!

cont. page 17

Seamanship

The discussion of safety at sea is an ongoing one. The factors under discussion don't change, views on how to deal effectively with them may, as we gain more experience.

Ruth Wharram has sent us this reprint from the British Columbia Multihull Societies Newsletter, February 1970. The piece was written during the early stages of the construction of Wendy and Harold Goddards ORO, KISKADEE. BCMS republished it under the title, "Has anything really changed?".

KISKADEE has since made a 7 year circumnavigation (see Sea People 1)

In the U.K. concern is growing that as the European Community spreads its control, sailors may come under new licencing rules and regulations. (See Sea People 11, Jims Column). To pre-empt this, recognised bodies are producing voluntary safety codes. MOCRA (Multihull Offshore Crusing and Racing Association) is acting as the umbrella organisation for British multihull crusing sailors and the PCA is affiliated to MOCRA. MOCRA have just published their revised Safety at Sea Recommendations. Compliance is voluntary, this document should be read by PCA members. It is available from the MOCRA Secretary, c/o 28 Keynshambury Road, Cheltenham GL52 6HB UK. It is likely to be referred to in the future. MOCRA will review their recommendations at the end of 1991.

PCA members with comments should make them to Tim Forrester, Rose Eglos Cottage, Budock Water, Falmouth TR11 5BZ. Tel: 0326 75087, our Cruising Secretary who sits on MOCRA's Safety Committee.

Meanwhile, read on.

The production of a safe offshore cruising multihull involves a seemingly endless number of problems which must all be faced and solved. Countless large and small decisions have to be made. The criteria for true success are in this very problem-solving process, however, and I believe the more questions asked by oneself and ANSWERED, the better will be the final result.

I will set out here, however inadequately, the eventualities I feel MUST BE PLANNED FOR by anyone thinking of building and sailing a multihull offshore. A very few of the ideas are mine; most of them I have gleaned from reading and from talking to people who have actually been "deep sea". Whatever the design finally chosen, the following ten facts (and, of course, many many others) must be faced squarely. If you choose to ignore or "put aside" any of them, I feel you do the cause of multihulls harm.

Here they are, in my own personal order of importance:

- 1. SUITABILITY OF THE DESIGN FOR DEEP SEA CRUISING
- 2. THE STRENGTH AND SOUNDNESS OF CONSTRUCTION AND GEAR
- 3. THE POSSIBILITY OF FIRE
- 4. PREVENTION FROM FALLING OVERBOARD
- 5. COLLISION
- 6. THE POSSIBILITY OF BEING HOLED (LOGS, ETC.)
- 7. SICKNESS OR ACCIDENT AT SEA
- 8. DRAGGING ANCHOR
- 9. PREVENTION OF CREW FATIGUE
- 10. INEXPERIENCE

The following are my thoughts on these points. I do not suggest that they are complete, not by a long way. I offer them in the hope that they will be of assistance to others in my position (initial stages of construction) and especially in the hope that they will lead to further detailed examination of the problems and, thence, to better and more practical solutions of them.

1. THE SUITABILITY OF THE DESIGN FOR OFFSHORE CRUISING

Multihulls are **not** self righting. The offshore multihull should, therefore, have MAXIMUM STABILITY. These factors enhance stability:

- (a) Size the bigger, the better.
- (b) Ample buoyancy well forward with reasonable bow overhangs, to prevent burying and tripping

Low hull centre of gravity - keep cabins low, keep weight low.

Working sails area should be kept small. (In light conditions, use genoas and spinnakers.)

Centre of effort of sails should be kept low - less heeling effect.

Wingdeck area should be kept small - to avoid pressure build-up (f) under hulls.

2. STRENGTH OF CONSTRUCTION

Hulls

- (a) Use the best available materials, save any "economizing" for other
- Do not glue in temperatures below those stated by manufacturer (b)

Do not depend on glue to "save" a badly fitted joint.

Do not alter any structural parts of the design without consulting the

To avoid rot, this is the time to carefully plan and allow for ventilation. Especially cupboards, bilges, seat lockers and enclosed

Rigging

It is particularly important to follow specifications in this area. Multihull rigging becomes much more highly stressed than that of monohulls due to the lack of heel and even small changes in sizes of rigging, angles of shrouds, etc., could be disastrous under tough conditions at sea.

3. FIRE

This can be broken down into various categories:

Due to Electrical Short Circuit

Have all electrical installations done by competent electricians, preferably ones experienced in boat installations and their special problems (moisture and corrosion).

Isolate the battery from all electrical appliances by means of a "MASTER" switch. (If you can afford them, use nickel-cadmium rather than lead-acid batteries. They are tougher, longer lasting, less messy, and can be charged at a much quicker rate. They also ' their charge" more efficiently.)

(c) If possible, site the batteries somewhere other than in the bilges, where it can often become very "damp".

Involving Cooking or Heating Fuel

(a) If you are going to use butane/propane for stove and/or refrigerator:

- make sure the installation is done by a qualified person. Have a shut-off valve between the tank and the appliance/s WHICH CAN BE REACHED EVEN WITH THE APPLIANCE/S ON FIRE:

 use flexible tubing anywhere there is a possibility of the copper tubing "working"

Isolate the gas cylinder from the accommodation and bilges. A special compartment on deck is probably the best arrangement, so that any leaking gas will vent overboard.

Involving Gasoline

If possible, make sure that any gasoline or gasoline fumes escaping from the engine or tanks will vent to the outside of the boat.

One of the drawbacks of multihulls (especially cats and smaller tris) is that the auxiliary must often be an outboard motor, for which one must then carry gasoline. Try to keep the amount carried to a minimum and, if storage can be arranged on deck (say a special rack for three or four 5-gallon tanks), so much the better.

Caused by Cigarette Butts

Easy to solve. Stop smoking! This remedy could also possibly add a year or two to your useful cruising life.

General

Probably the safest solution is to use diesel and/or kerosene exlusively for cooking and engine fuel. These are of course capable of burning, but do not have the problem of producing heavy explosionprone fumes.

Have an ample number of fire extinguishers aboard AND HAVE THEM CHECKED REGULARLY. Their POSITIONING is very important and should be carefully planned. It is no good having a large extinguisher aboard if, at the crucial time when it is needed, the flames from a burning appliance effectively prevent you from reaching it.

It is possible to be struck by lightning (although the chances are small and this would be really bad luck). I, nevertheless, intend to look into ways of effectively grounding my standing rigging.

cont. from page 16

SWAN ISLAND TO BELIZE (17 MAY TO 19 MAY)

The day after Swan Island I took my final sun sights. They placed me a days sail from St. Georges Caye, Belize, my final destination. At last light we took the spinnaker down and reefed to the smallest sail possible. I also trailed a car tyre astern as my sea anchor, this was done to slow down the approach to the reef, so as to ensure a daylight passage through the islands and Cayes. However at about 0200 hours local, Danny, who was on watch, at the time sighted the first light, I knew this to be a lighthouse on Lighthouse Reef this meant we were further ahead than I had expected, which was probably due to the strong local current. We sailed on hoping to find somewhere to anchor off for the night. The next light we spotted was Mauger Caye. This was where I had decided to anchor off until daybreak. However, I was unaware of the extent of the reef surrounding the Caye, it hadn't come out too well on my photocopied chart. At about 0400 hours local I heard the reef breaking ahead of TIKI so I quickly came about and hove to. Danny tried to start the engine but it wouldn't fire. He also pulled in the sea anchor, to give more control if I required to take any avoiding action. We could now hear the reef clearly behind us, so the immediate danger was over for the moment. Although it was still dark I looked over the side to see if I could make out the bottom, which I could at about 10-15 feet below. So we laid out the anchor, and set to work on the engine, which we soon had running once we changed the spark plug.

I took stock of the situation, the anchor was holding well and on inspection there were no signs of wear to the chain or rope; which is a common problem when anchoring amongst coral. Daylight would soon be upon us in 1 hour, when I hoped we would be able to sail away and navigate the Barrier Reef which is the second biggest in the world. I didn't consider moving whilst it was still dark as this could have fatal consequences, although in hindsight it would have been a good idea to lay out a second anchor, which I had done on almost every occasion previously. We were sitting down on deck having a cup of coffee when a squall started to blow, within minutes the waves had doubled in height, I checked the anchor several times and all seemed well, then suddenly there was a loud thud, and instantly I knew the anchor and I had parted company. Danny started the motor on the third pull, and I quickly unfurled the sails and we started to sail away. The first

cont. on page 18

rays of sunlight had just kissed the horizon, when suddenly we struck a coral head and spun around facing the reef, the next wave lifted TIKI and slammed her onto the reef. The breaking waves and surf continued to push TIKI further onto the coral, until we were firmly stuck. Both hulls were now holed and slowly filling with sea water. The depth of water on the reef was only eighteen inches and we were able to walk around the coral. We attempted to self rescue but after two hours I had to admit defeat. Now that both hulls were half full of water. I knew that only outside help would get TIKI off the reef and I would have to act fast. I called for assistance on the VHF radio, on channel sixteen, but at this early hour in the morning, nobody answered my call. So I then tried the HF international distress frequency of 2182 Khz but I received no replies. Eventually I put out a Mayday on a Ham Radio Network operating out of the USA. Some Hams in the United States heard my call and passed on my Mayday to the US Coast Guard, who in turn passed on the information to British Forces Belize HQ. The Force HQ talked to me via the HF radio link, but by now my battery power was fading. They told me that a rescue operation was underway, then the batteries failed. I realised that I would have to go ashore to organize some form of salvage operation. We were rescued three hours later by the Maritime Division of the Belize Defence Force. When we left TIKI, although she was full of water, she was in good condition, even though she had lost one rudder. I knew that if I could return within 24 hours she was completely salvageable. However, once ashore I found out it was a National holiday weekend, and it proved impossible to return that day. The next day we made an attempt to reach TIKI, but the weather proved too bad, and we had to turn back. It took three days to return to the reef and my fears were proved true. The bad weather and storms had pushed TIKI over the dry reef, in the process the corals had ripped the bottom completely open, spilling the contents all over the reef. We salvaged what we could and said goodbye to the boat which had brought us over six thousand miles of ocean. I felt saddened by the loss of TIKI. We had been only fifteen miles short of our final destination, St. Georges Cave, when disaster struck. However, she was the first of the TIKI 26 range to complete an ocean crossing, paving the way for other to do so.

For those who ask me was it worth it? Yes without a doubt.

cont. on page 19

(d) Of 180 yachting accidents investigated by Peter Tangvald (of "SEA GYPSY" fame), the second-largest number (29) involved fire, broken down as follows: 8 kerosene, 8 propane/butane and gasoline, the kerosene fires were brought under control, while ALL 8 involving propane/butane and gasoline led to the TOTAL loss of the yachts involved.

4. PREVENTION FROM FALLING OVERBOARD

- (a) Have properly designed pulpits and pushpits, strong stanchions of decent height (30" at least) and double lifelines all round.
- (b) Every crew member should have a safety harness and personal lifeline, for use in rough weather, or while alone on deck.
- (c) There should be properly planned, strong places to "clip-on" to.
- (d) The personal lifelines should have carbine hooks at BOTH ends.
- (e) Wear life jackets in rough weather.
- (f) A horseshoe life preserver, with pole-type marker buoy, should be carried where it can be flipped into the water within seconds of "man overboard".
- (g) On passage, especially under "self-steering", trail a long buoyant rope.
- (h) Practice your "man-overboard" drill, so that all crew members know exactly what to do.

5. COLLISION

- (a) Carry a radar reflector, either permanently in the rigging, or capable of being rapidly hoisted.
- (b) Carry a powerful spotlight and flarers.
- (c) If crew size permits, set round-the-clock watches while in the vicinity of shipping lanes.

6. HOLING

- (a) Watertight bulkheads are a good idea, at least in the floats (for tris).
- (b) Better still is "foamed-in" floatation. (With the proper use of foam floatation, any multihull can be made to float LIVEABLY HIGH in the water, upright or in capsized position, even if completely filled. Why more use is not made of this material is a source of constant surprise to me maybe it's the cost. Incidentally, by completely foaming-in hard-to-reach nooks and crannies such as bows, etc., you also eliminate the need for ventilating these areas).
- (c) Carry a proper covered liferaft. It's always possible the yacht might completely break up.
- (d) At least two efficient diaphragm type (less likely to be blocked) bilge pumps should be carried. A good idea might be to install plastic tubing from the lowest point in each hull to deck level. The pump can then be attached wherever and whenever needed.
- (e) Carry tools and materials (plywood, fibreglass, etc.) sufficient to effect any necessary temporary repairs.

7. SICKNESS OR ACCIDENT

- (a) Carry a well-stocked first aid and medical kit (consult your doctor) and know (learn) what everything is for. David Lewis' latest book "Children of Three Oceans" contains an excellent chapter devoted to this subject.
- (b) Get a good comprehensive first aid book.
- (c) If still single, marry a nurse (or, better still, a doctor)!

8. DRAGGING ANCHOR

Accidents involving ground tackle, poor choice of anchoring ground, etc., are the most frequent types encountered:

- (a) At least one (better, two) reserve anchors should be carried.
- (b) These should be of adequate size and holding power.
- (c) They should be of different types, since there is no single design suitable for all the bottom types likely to be encountered in cruising.
- (d) Select your anchorage with extreme care (for type of bottom, depth, proximity of coral heads and reefs, protection from onshore winds, etc.). This is a complete subject in itself.
- (e) If anchor warp is used, check constantly for chafe.
- (f) Do not use polyprop, which floats. It is easy prey for passing propellers and very subject to chafe. Nylon is best.

9. CREW FATIGUE

Fatigue can lead to poor seamanship, crew friction, sickness, and, in severe cases, hallucinations. It should be carefully guarded against. It is caused by: –

(a) Lack of food (least serious).

(b) Lack of comfort – this can be avoided by keeping the yacht dry (especially the bunks) and warm. To these ends, plan an oilskin locker immediately at the bottom of the companionway so that wet oilskins do not get tramped all over the yacht. Have a stove capable of properly warming the cabin.

(c) Lack of sleep (most serious). Arrange watches so that each crew member will get 7-8 hours sleep in ever 24 hours. Factors conducive to sleep are food, dryness, warmth, quiet, and a shot of grog! Incidentally, alcohol is a depressant, so do not have a "shot" prior to going on watch to "warm the tummy". It will be more likely to put you to sleep. Note also that two 4 hour periods of sleep are just as good as a continuous 8 hours.

10. INEXPERIENCE

Before you venture "offshore", GET TO KNOW YOUR BOAT. Take her out in every possible condition. Better to make your mistakes in English Bay than in mid-Pacific:

(a) How does she lie a-hull?

(b) How does she heave-to?

(c) Reef the sails often, especially in rough conditions.

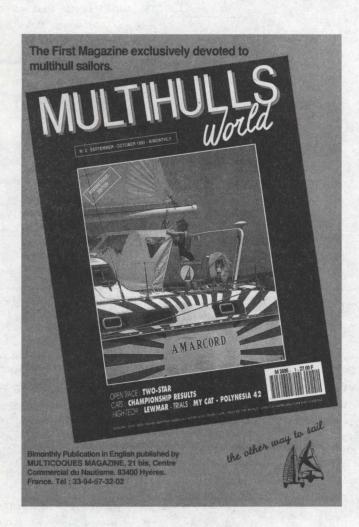
(d) How does she balance under sail combinations?

(e) How close to the wind will she sail in rough seas? Will she tack?

(f) How much way does she carry after rounding into the wind?

(g) How much leeway is there in various conditions and on various points of sailing? (Important to navigator).

(h) How does the auxiliary push her in various conditions? e.g. against a strong tide?



Would I do it again? Having learnt some valuable lessons in financing, organizing and planning the whole project, not to mention, the fitting out, navigation and seamanship, I am now setting my sights on competing in the Single Handed Trans-Atlantic Race. This will represent the ultimate challenge for me!

Well...

Bob Beggs' campaign to enter the June 1992 Singlehanded Transatlantic race is now underway.

"Debs" Borrill is acting as Bobs campaign manager/ fundraiser. They aim to raise funds through sponsorship, any excess cash will be donated to the JUBILEE SAILING TRUST.

The Jubilee Sailing Trust was set up to allow physically handicapped and able bodied people to "share the challenge of crewing a ship at sea".

The trust runs the 54 meter, L.O.A. three masted, square rigged barque, the "'Lord Nelson'', Steve Turner of IMAGINE MULTIHULLS has been commissioned to provide two new G.R.P. TIKI 26 hulls for the race.

All gear salvaged from Bobs original TIKI 26 will be re-used.

Anyone interested in supporting/sponsoring Bob should contact Debs Borrill at: Safeguard Shredding, 9 Florence Street, London NW4 1QG. Tel: 081 203 5127. Fax: 081 203 6232.

ANCHORING AND MOORING

PART ONE

This article has been supplied by Steve Turner, he received it from Australian sailors, cruising Europe in a 30' Hitchhiker Catamaran.

COMING INTO A QUAY

a. Bow too:

Advantages:

- easy to do good manoeuvrability especially with a 'cat'.
- privacy in the cockpot
- when leaving it's not difficult as you have the anchor line to pull you out

Disadvantages:

- tend not to use the bow anchor
- slower to leave if a blow comes up in an open harbour

Technique:

- Motor in slowly in a straight line, between other boats anchor lines
- Crew may let go stern anchor and then walk to bow (or helmsman may release a little holding line)
- Crew throws lines to person ashore or jumps ashore while helmsman touches reverse prop and maintains pressure on the stern line (by pulling) and then once it is cleated off may use some forward prop to help hold the boat in position until the bow line is tied up.

b. Stern too:

- little privacy
- difficult to reverse with single engine cats
- but quicker to leave the quay in a blow

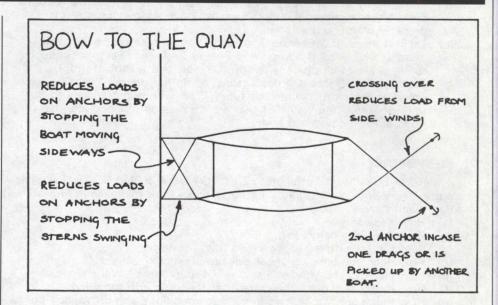
Technique:

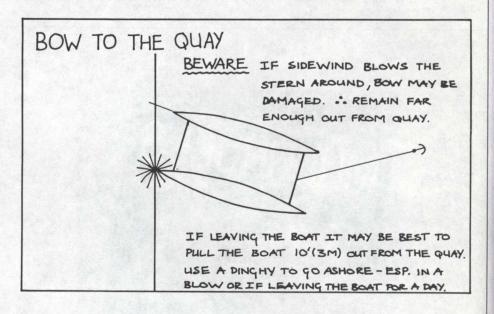
- Drop crew off in a dinghy with a long rope. They tie it to the shore and row out to meet the boat.
- meanwhile the skipper drops the forward anchor and reverses back to the dinghy

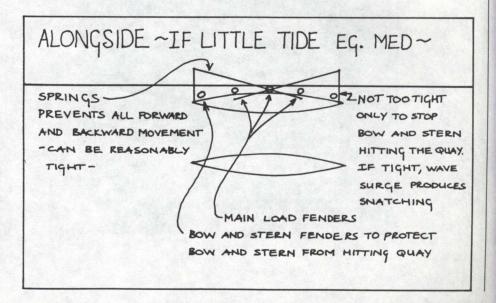
COMING IN TO TIE UP TO A TREE, A STUMP, ROCK, ETC. IN A BAY

a. Bow first:

- It's critical to get that bow line tied up quickly after dropping the stern anchor, before losing control
- Motor the cat as close into the shore as possible, then the ' crew goes over the side with the line and flippers and swims or wades the last few metres.







 Alternatively, the crew may be in the dinghy with the line coiled neatly in figure of '8's' holding onto the bow of the cat, as the helmsman drops the stern anchor, and takes the dinghy as close to the shore as possible.

LEAVING A BUSY QUAY

a. Bow too:

It's often difficult to pull in 2 stern anchors at once. Pull up 1 with the dinghy first, have all the bow lines released except 1 or 2 returned bow ropes (i.e. loop a line around a bollard so it can be let go from onboard the cat) so that it's easy to slip them. Haul the cat out on the anchor line, helmsman steers and fends off other yachts while crew hauls in the anchor line.

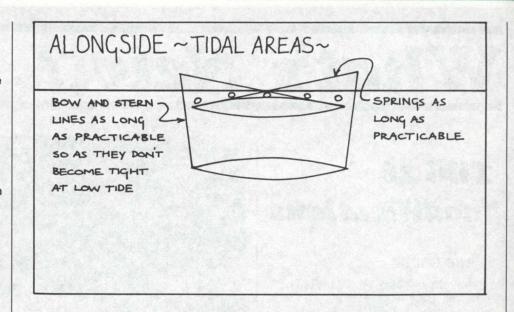
If there is a fresh side wind it may be necessary to use reverse prop to move out very quickly so as not to get caught in other yachts anchor lines.

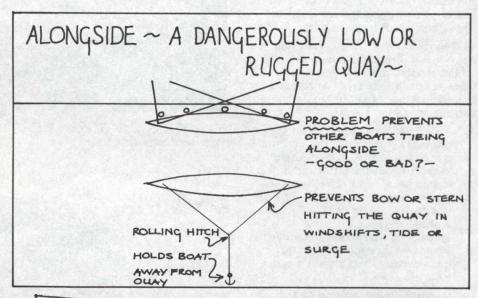
The biggest problem occurs along a packed quay when there is a strong side wind. Yachts frequently drop their anchor and then get blown off sideways into other yachts' anchor lines. When entering the trick is to enter quickly and get protection between the other yachts and get those shore and anchor lines tight quickly. Once one line is tight, you can sort the rest out later.

When leaving a quay in the same conditions — leave quickly and get the yacht out past the other anchor lines before it's blown into them, whilst hauling in the anchorline in any old way so that the anchor line doesn't snag on another yachts' anchor.

RUNNING A CAT ONTO THE BEACH - LANDING AND LIFTING OFF

- Check your tides is it a spring high tide?
- Pounding is the problem.
- Be careful of open beaches and later afternoon onshore breezes.
- Beware of swells.
- A 1' 2' (30cm to 60cm) wind wave may cause no problems where as a 4' (100cm) may pound the boat badly.
- A boat can pound badly for hours in an almost calm at neaps low tide — i.e. almost touching for 2-3 hours but not quite going aground.
- Spring tides with large tidal ranges are good because the boat settles quickly and may bump for only a few minutes.





BOAT ROCKS
EASILY WITH THE WAVES &
REVERSES OFF EASILY EVEN
THOUGH ITS STILL HARD AGROUND.



WILL NOT REVERSE OFF TILL THE BOAT STARTS FLOATING

> A sloping beach gives a much safer landing and take off than a flat one if there are some waves (especially with fins or keels) because the boat tends to rock with the waves rather than the whole length of the boat jarring onto the sand.

Also, when lifting off, the steeply sloping beach with some reverse (or hauling an anchorline) the boat drags off easily, whereas on the flat the boat will not drag until the whole boat is afloat.



Tieing up to a tree beat Rettemund's ORO 'KIDO'

Photo: S. Turner

What's New!?

Tiki 26 modifications

by BOB GOODE

I bought my TIKI 26 'HELARCTUS' from Phil Tadd in May 1989. She is a wooden boat, very well built and maintained, and we are having a lot of fun sailing in the Medway and Thames estuaries and generally between the Essex and north Kent coasts.

Over the course of the last year we have made 3 modifications/additions which readers may be interested to learn about. These are illustrated in the enclosed photos but the following explanations may also be useful.

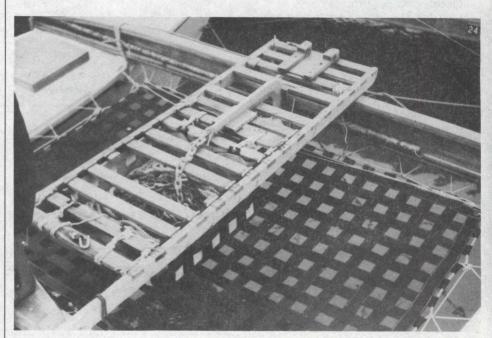
1. THE TRAMPOLINE — this was originally made from the synthetic material you see on the racing cats. It needed a bit of repair but it also seemed to have hardened up and become 'aged' — perhaps due to the effect of U/V light. I wanted to replace it with something that would take hard wear and give me something considerably longer than a two year life span.

After ringing around to find out about likely alternatives I decided to make up my own trampoline using 50mm wide nylon seat belt webbing, weaving this to give 50mm gaps between the strips see photo. The cheapest way to buy this is a 50 metre roll for about £40. Actually turning this webbing into a trampoline became a 'labour of love'. After some abortive attempts with staples and glue failed to give me a stable mesh, i.e. one I could handle and sew, I eventually set the whole thing up on a frame and hand stitched two sides of each overlap. This takes hours and hours and it is best to get the family involved. You also need long arms and be able to work all around the frame from above and below! The end of each length was stitched back to make a loop, so that a rope can be run all the way round the outside. I then took the trampoline to my local sailmaker who put an eye into each corner and overstitched all the way round the perimeter.

We've had this in place for nearly a year now and I'm very pleased with the result.



HELARCTUS, Bob Goodes TIKI 26 showing catwalk/anchor box and deck tent erected Photo: B. Goode



Details showing catwalk, with anchor stowed and webbing trampoline construction.

Photo: B. Goode

Rudy Choy, in his C.K.S. Catamarans, first used heavy tight-woven webbing on his catamarans in 1950-70. He (or someone else) particularly noted that, even when lashed tight, the slight flapping quickly frayed the lashing. Our 51 foot TEHINI, on her launching in 1969, had a beautiful woven webbing forward trampoline which was lovely to walk or lie on. We soon found the same problem as reported by the Choy people. We also found that in a heavy sea, it could substantially hold water. When it quickly showed signs of wear, we changed it to the much cheaper fish netting re-inforced with rope. This was much more effective in shedding seawater and not wearing out its lashings. It is, however, nowhere as comfortable as a webbing trampoline — "You pays your money and you takes your choice!"

THE CATWALK - I was not happy with lowering and weighing anchor off the bows of one hull, (particularly at night when it's a bit choppy), so I built a catwalk to span the gap between the middle and first beam. This is only lashed to the beams but it gives you something solid to stand on and a decent bearing surface to raise and lower the anchor from. I then decided to use the underside of this catwalk to store the anchor chain and rope warp and thereby keep water and mud out of the forward bulkhead. Again our 50mm nylon webbing came in useful and this time I made up a webbing 'box', which is slung under the catwalk to form a chain and warp 'locker'. The anchor is lashed to the catwalk. To stop the chain and warp falling through the gaps I put a rigid plastic bottom in the 'locker' and some light synthetic woven material around the sides. The result of all this is that we have a nice platform to work from and a self cleaning and free draining ground tackle storage area that is readily accessible.

3. THE TENT – Let the photo speak for itself. We made ours from plastic tarpaulin used by builders. Our whisker pole becomes the ridge pole and the whole lot stows readily away when not in use. It is a bit noisy when it's windy but it forms a nice cosy unit for the colder evenings.





Re-fitting IKA ROA

By HEATHER WHELAN

In 1981 Tim and Heather Whelan launched their Narai MKIV IKA ROA, in Nottingham (England), in 1985 they arrived in New Zealand. Here their two daughters, Faith and Elizabeth were born.

After three years living and working in Auckland they moved back on board IKA ROA.

Below Heather describes the process of re-fitting IKA ROA, the changes required by two young children and those modifications made after five years of ocean voyaging experience.

Particularly interesting is the change of the starboard hull to a flexispace interior. This hull, with its original fittings appears on page 25 of the "Wharram Design Book" illustrating a "luxury interior".

Three years of neglect meant IKA ROA was not in any condition to go offshore without a thorough overhaul so we moved further north to Ngungura near Whangarei where she was craned out onto the hard, amongst the mangroves, whilst we rented a house for the winter.

Tim spent 7 months working on the re-fit and in November 1989 we moved aboard again and hopefully this season we will cruise more of the Pacific. The re-fit included a few alterations necessitated by having a two and a three year old aboard but many were ideas we had while cruising and may be of interest to other builders.

IKA ROA was originally sheathed with nylon and resorcinol and this has

been very successful. Her colour, black, however, made the interior far too hot in the tropics so we repainted her pale blue. While the boat was blocked up Tim added vortex generators or end plates to each keel, which have worked incredibly well, (see issue 9). Our turning circle is now much smaller and we make far less leeway.

We already had guard rails in place but to make IKA ROA more childproof we added pulpits and pushpits at bow and stern, and netting of course, to fill in the gaps.

One thing we often wished for was a reliable engine since we only had an old and unreliable outboard motor. I know there are many people who feel that motors are an unnecessary luxury but there were many times

when a motor that could work properly would have made life a lot less stressful for us. I remember motoring in light circles as Tim called up the swing bridge operators at Curacao (Dutch Antilles) on the VHF. We had to wait until they were ready to open the bridge while the waves in the channel were getting bigger, the outboard was sounding feebler and there was nothing to tie up against.

Similarly, going through the Panama Canal would have been a more enjoyable experience if the outboard had not died in the first lock. Tim had to take the thing to pieces and do a heart transplant as we sailed across Gatun Lake and we were lucky to have a sympathetic pilot.

Sometimes our outboard would go, but only at full throttle. We astonished the yachties already at anchor in Atuona Bay, Hiva Oa (Marquesas) by motoring past everyone at top speed, dropping a stern anchor as we turned through 180°, racing forward and dropping another anchor from the bow just before we were pulled up short, then going astern again at full rev's to check the bow anchor was still holding, then cutting the engine!

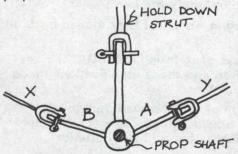
Unknown to us they had just witnessed another Wharram cat ('VAVAKA AHO' from California) entering the harbour with its outboard rusted up and dead from exposure. Their entry was the opposite to ours; they drifted in sideways with no wind, slowly, missing yachts here and there...

Our engine installation is a typical Wharram-style one with an air cooled diesel housed behind the main mast and a long prop shaft on a universal joint. The prop is held in position while we are underway by a bridle and a small diameter galvanized tube to stop lift. This system developed over 3 or 4 days of trials at Don Braziers house

Libby Whelan in IKA ROA's cockpit, part of the engine box on the left of the picture.

Photo: H. Whelan

a year ago. We intended to have 'vanes' like 'Nick of Time' had but these were too close to the prop (at A and B, see sketch) and virtually stopped it. No vanes meant that bridle x became slack and banged on the prop! The hold down strut seems to work quite well although it is a very basic answer done with the materials at hand. Tim prefers Steve Turners idea of the basketball hoop around the prop.



The engine and gearbox (which has a large thrust bearing at its rear) are mounted rigidly to an engine box (including two anchor wells) which extends 4' fore and aft filling the space between the two hulls. This is then rubber mounted to beam no. 2 and a short beam as per the cutter rigged Narai plans except this is hollow on our boat.

We always liked our large slatted deck, especially when we were socialising in the tropics, but there were times when we felt the need for more shelter when steering and, with the arrival of the children, somewhere where they could play in safety underway. Since we were already adding an engine we decided to site a cockpit behind the engine and back to the 3rd beam.

The cockpit is basically a box approx 1' deep which is supported in a similar way to the PAHI 42 cockpit and stiffened by the seating which runs along each side. Beneath the seats are lockers.

We now steer by wheel (which took a little getting used to after using a tiller for years, we kept turning the wrong way at vital moments!) This is centrally placed at the after end of the cockpit with the compass mounted on the top of the pedestal/bracket holding the wheel.

Before leaving England we fitted a diving platform hinged behind the fourth beam. This has been really useful not only for swimming from but also for getting in and out of dinghies. Now our girls enjoy splashing their legs when sitting on the edge of it and before long they'll be swimming from it too

Now that there were to be four of us living aboard, it became necessary to 'rationalise' our accommodation. Firstly, in the port hull we reverted to the layout as per the plans and built a berth where we had originally had our chart room.

Faith and Libby sleep in these

bunks so in the evenings we have complete privacy to entertain in the starboard hull. Luckily they sleep soundly enough for us to cook in the galley in the evening.

Apart from replacing our old Kerosene 2 burner stove with a gas cooker (luxury!) there was very little structural change in the galley, just a lot of painting and varnishing.

Because of the mess involved we decided that the children should always eat at the table. Tim made a varnished plywood table which is stored along the side of the hull beneath the galley bench lockers when not in use. At meal times it drops onto bearers on a shelf and locker front.

In the stern compartment, which previously had been a combination of attic, garrage and tool shed, Tim has now set up his workshop with sitting headroom.

With the workbench removed from the main cabin in the starboard hull we decided to 'flexi-space' the area. In other words remove any extranious furniture. We used to have a raised floor in the forward half of the cabin, so we raised the whole floor level (to bunk height) which gives about 5' headroom. We removed the bench seating and table but built in a wider top shelf and a solid companionway ladder. The interior was painted white, the floor cork tiled to match the cabin sides and top.

This gives us a floor space large enough to sprawl around on beanbags and cushions in the evenings. During

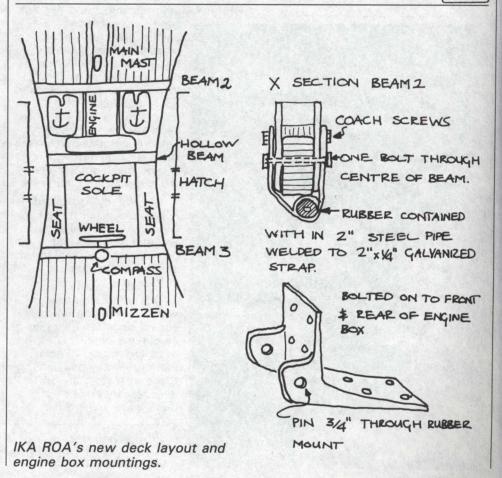
the day the kids can play here; their toys are stored under one section of the raised floor.

As yet we have not built the intended portable chart table/box so just use the floor to navigate on! This area is very light, bright and spacious and seems more roomy than the previous interior.

We have always used a portable toilet but after arriving in NZ we threw away our grotty old porta-potty and Tim built a plywood housing for an ordinary bucket which we top with a varnished wooden toilet seat. This looks really good and is the neatest bucket and chuck-it I've seen. (The Pardey's is similar but being an openplan monohull theirs is beside the companionway!) It may be a hassle climbing in and out of hatches but at least Wharram's have private spaces.

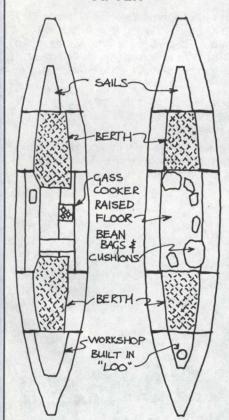
Some people prefer sea toilets but we've met lots of yacht owners who have had the unsavoury experiene of unblocking them. Many boats have 'no paper down the loo' rules. Somehow it just seems easier to empty a bucket once or twice a day.

We've now lived aboard IKA ROA for 6 months and done quite a bit of coastal cruising. So far everything has worked well and the children are enjoying the lifestyle. Faith has learned how to row (at 3 years old) and Libby's vocabulary is full of words like 'boat', 'row', 'seagull', 'seaweed' and 'beach'. Faith talks knowingly of catamarans, trimarans and those unfortunates who only live aboard monohulls.



BEFORE SAILS BERTH 2 RAISED FLOOR. 下 WORK GALL BENCH-CHART ROOM BERTH 2 AMAZING HEADS" COLLECTION OF USEFUL ARTICLES (?)

AFTER



IKA ROA's change of layout below decks, Sea People No. 1 contains photographs of the original layout.

Have you read?

By RUTH WHARRAM

Most of you will know or know of Wade Doak's book 'Dolphin Dolphin', wherein Wade, who uses a RAKA as a research vessel, describes encounters and communications with dolphins. Unfortunately, this book is no longer — at least not at the moment — available.

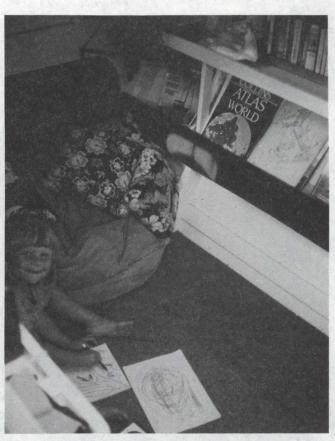
However, I recently received a copy of his latest book 'Encounters with Whales and Dolphin', a sequence to his previous work wherein he describes not only his own 'Project Interlock' and Jan and Wade Doak's communication with dolphins with 'mimetic use of a dolphin suit, music and creative play', but also a history of 30 solitary dolphins and dolphin groups all over the world who sought human companionship. They include accounts of dolphin tribes working

together with fishermen and those where dolphins have rescued people or warned them of dangers.

Since 'Dolphin, Dolphin' was written there have been more and more interactions with whales — humpbacks, greys and orcas. These amazing encounters sent to him through his international network together with two books that had inspired him to explore deeper the cetacean mind confirm his thesis that the ocean creatures he had met possessed awareness and that 'ocean mind' exists and could communicate with us.

The two books were Donal Griffin, an experiemental biologist's 'Quest of Animal Awareness — Evolutionary Continuity of Mental Experiences' and Dr. Michael Bossley, an Australian psychologist's still unpublished review of the scientific evidence of non-human mind.

Wade Doak writes: "Our own research into human/cetacean relationships belongs in this concept — the continuum of mind that extends into the ocean and forests of this planet. I do not want to place cetaceans on a lonely pedestal adjacent to our own but rather, to provide hard-won evidence from the sea that extends and re-inforces both Griffin's and Bossley's thesis. I suggest that we visualize the mind continuum not as a hierarchy or ladder, but as a degree in a compass rose".



Faith Whelan drawing in the "flexispace" hull - note how lowest shelf form a padded backrest.

NEWS FROM SEA PEOPLE....



New Zealand

Tim and Heather Whelan have sent more news from New Zealand. Tim is teaching in Whangarei for the next couple of years. They have moved "IKA ROA" (NARAI MK.4) away from the Braziers and will be living on the town basin in Whangerei. New address is c/o the P.O. Whangarei.

Christmas 1990 was spent cruising in company with the Braziers "Katipo – NARAI MK.4". Sailing around the Islands of Waiheke and Ponui in the Hauraki Gulf. At one stage the Braziers were sleeping 11, from 7 year old Timmy to 76 year old Grandma, aboard Katipo.

Charlie Wrigglesworth and Heather King's boat, a PAHI 31 is almost ready to launch, but they won't do so until January 1992 as they have work to do on their house and land near Warkworth.



Above the Braziers NARAI MK.4 "KATIPO"







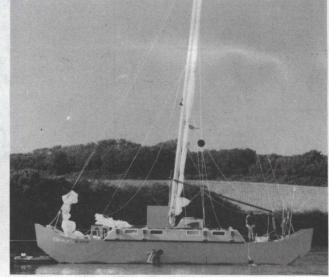
Germany

Photographs above, Robert Waldow sailing on Thomas Thomas Gehm's TIKI 21. He writes: "We sailed TIKI "WAGAPUNT" in the Baltic. It was October and already rather cold. On the return we had a Force 5 wind and waves 1.5m — 2m high. First we sailed under full sail, TIKI was absolutely in her element. It was just like letting a young horse run through the fields. We quickly caught up with the monohulls.

Photograph below right: HITIA 14 "DRAGONFLY" built by Phil Young who with Günter Müller is now building the HITIA 17 professionally in Germany – Schwabacher STr. 15. D – 8542, Rothaurach b. Nürnberg Germany

Photograph below left: Best wishes and good luck to Nicolei and Rolf, who start for the first time to cross the Atlantic from Tenerife to the West Indies with their Captain Cook "CATANOA". Best wishes from your German friends.







FRANCE

In France all craft are placed in categories which determine how far they may sail from a safe haven (see Sea People No. 11). In March 1991 the TIKI 28 became the first catamaran under 8.6m to reach the second category (reference the magazine Bateaux).

Sophie and Ivan Girard, in order to gain this classification for their TIKI 28 had to attempt to sink her.

After removing all equipment and electrical fittings from the boat and filling the buoyancy chambers with foam, the two hulls where filled with water to the open hatch level. With both hulls filled the cockpit contained about 35cm of water but the pod reamined dry (see sketch below).

"The Marine Inspector came and was very surprised by the good stability of the ship when filled up with water - so that we have obtained the second category for the boat, i.e. 200 miles from a safe shelter - just before the first category which is given for boats which can sail all around the world.

The same inspector told us that some French shipyards could take 'good ideas' to obtain the same results. After that we removed the water with a small motorpump and the inside of the boat was very clean and she floated on her original lines, ready with fittings back in place for happy sails."

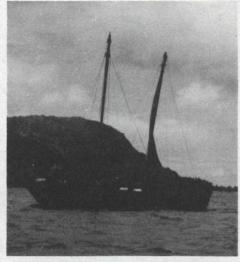


Gary Scholze

RO 1 Box 101 AMITY PA 15311 U.S.A. says: - I have been unable to find much info about building my TEHINI. I would be interested in info concerning building, sailing, outfitting etc. a large Wharram.

I have never even seen or been on a complete boat. I am using epoxy and making some interior changes.

Can you help him?



Martin Von Jen's NARAI MK.IV 'SEA HORSE" cruising HANALEI, KAUAI, HAWAIIAN IS. SUMMER





RÉUNION

THE TANGAROA MK.4 "HEONOS" built by Anthony Adkins and Fred Balyu was launched recently on the Island of Réunion. The photo above shows HEONOS being winched out by her owners while helpers push.



THAILAND

Mike Cox lives and works in Thailand. He has built 3 HITIA 14's and is presently constructing a TIKI 31.

His own HITIA was lost in a yacht club fire, of the other two he writes: "They are being operated by a Thai called Somchai on the island of Samet down towards the Cambodian border".

He continues: "Well, I got busy this month and have now wire stitched the first TIKI 31 hull together. I've only got one bulkhead finished, but will race on after this coming delay, a trip back to work on the drilling rig.

We plan to publish a more detailed account from Mike in the next issue.

Below: Sketch showing how the Girard's TIKI 28 floated when flooded.





BRITAIN

Tom McCarrick who sails a TIKI 28 writes:

I have had the opportunity this summer to spend very many hours sailing the boat. This has all been inshore and mostly confined to the estuaries but I have sailed in all kinds of wind conditions including days when we were alone on the river as the wind had kept other boats in shelter. The harder it blows, the better she likes it. Sailing hard on the wind, in 6-7-8 conditions she seems to quickly get up to about 8 knots and then happily thrash along. I have never been out in any kind of difficult sea, so I have no idea how she would behave in heavy wind and a big sea. I am sure one of the difficulties would that the boat would be inclined to go much too fast for the sea conditions. I intend to fit another set of reef points on the mainsail.

I have very much enjoyed the friendship and companionship of Jim Chapman in his new TIKI 26. We have spent a lot of time together and the two Wharrams are now a very familiar sight on the Blackwater and Colne. We have worked out some of the complex problems of setting the mainsails properly and we will be changing the rig a little so that next year we can make adjustments more easily. We had intended to write up our ideas and experiences for the magazine and spoke to Steve about this at Southampton but so far we have not had the time. The core of what we have found is that it is necessary to be able to adjust the peak, the uphaul and the downhaul for any partiuclar point of sailing, with the sheet providing the final trim. This of course is no news here in the land of old and new gaffers of all shapes and sizes, but the Tikis have their own particular problems and, we hope, solutions. On both the 26 and the 28 there is a remarkable difference in performance when the mainsails are properly trimmed. Hopefully by the middle of next summer we will have a clearer idea of the best way to do that. By the end of this season we had begun to get the boats going well, but I think it is fair to say that we did not quite know how we managed to do it.

Both Jim and I have firm plans to move the boats to the West Country next summer, but we will do some racing here first, probably in the months of April, May and June. We had a taste of things to come when Jim and I together with Dave Barker (TANE NUI) led the fleet into Burnham

by ten minutes on a race from the Blackwater in the TIKI 28. We sailed up the Crouch, close hauled and only had to make one tack. It was fun.

Tom has promised us an article regarding sail trim, for the next issue.

Ed.

Bob Goode, owner of the TIKI 26 HELARCTUS, who's article appears in this issue of the Sea People is interested in finding other Wharram cat sailors in his part of England, Kent. He sails in the Medway and Thames estuaries and can be contacted by telephone at (0622) 755592.

Mike Taylor, 228 Basingstoke Road, Reading RG2 OHH, U.K. writes: "Could you please put me in touch with anyone who would like to have me as a paying working crew member for weekends. I have quite a lot of experience sailing mono's up to 40' but not cats".

News from Mark Douglas:

I enclose a photo of our HINEMOA, the 'FANTASY', which we bought from my brother, Francis. (See Sea People No.6). The reason for sending you this was that I thought you would be interested as the craft is now ten years old. During the winter months, Sally and I spent hundreds of hours going over every square inch of her, stripping and repainting as we went, however our efforts were only cosmetic as no other work was required. We can now say with absolute confidence that there is not a

part of this craft which is not in 'as new' condition.

The point, therefore, that I wish to make is this: The Fantasy has been worked quite hard each season for ten years and upon detailed inspection she was in perfect structural condition. This to me is extremely interesting as she was traditionally built with great care and the best materials. She has never been sheathed or had any form of treatment other than regular repaints with International Paint and Cuprinol.

To move on, Sally and I live on the Fantasy most weekends during our season from beginning of April to the end of October. Now our cruising area is around North Norfolk with its 'Barred' and drying harbours, and the reality is that you spend most of the time sitting on the sand and not sailing. For us this is fine as the 'pay off' is that very few yachts want to come to Norfolk and so we can enjoy tranquility and peace. Now, for this type of ditch crawling the Fantasy is wonderful, shallow draft, small overall dimensions, very strong to take the ground twice a day, while staying quite fast and fun to sail. We have a very well fitting deck tent, but sitting under a tent for the length of time that we do because of a lack of water is no fun in comparison to a cosy cabin.

I have spent hours studying the design book and I find the TIKI 31 beautiful but it is too big. We need a TIKI 31 of about 27 or 28 feet long, a cross between the Fantasy and a 'Fisher Motor Sailor', sort of comfortable but tough. The sort of boat that can sit on the sands in the remotest creek in the driving rain while two people sit in reasonable comfort watching the seals and birds.



Mark Douglas' HINEMOA "FANTASY"



SCANDINAVIA

H. Murto sent the photograph alongside.

He launched his beautifully built TANE NUI "REMU" in 1989 at Helsinki.

She is pictured sailing during 1990 in the Gulf of Finland.



SMALL ADDS

FOR SALE: TIKI 21 main and jib, 6 years old for £140. R. Waldow, Engertsweg 23, D 5358 Bad Münstereifel, 02253 8016. Germany

TIGER TANE

27'6". Sheathed marine ply. 2 single berths plus double under deck tent. Galley and navigation area. Aluminium spars. 4 sails. 12 volt electrics. 8 HP Yamaha outboard. Sound, fast boat. £3,750 ono. Tel: (0273) 463334. (U.K.)

NARAI MK 4

1985 Ketch Rig, Aluminium Masts, Twin inboard Diesels, Fully Pressurised H & C. 8 Berth. Fully equipped for long distance cruising. £24,500. For further details contact Michael Vine on: 0297 20756 (U.K.)

Tiki 21 and Capsize

Since the first TIKI 21 capsize in 1988 we have received another 2 reports of capsize. In both instances the causes were similar; unloaded boats, full sail, crew to leeward and strong wind or gusts.

Briefly, John Heads son Alex (15) was sailing the family TIKI 21 with a crew when it capsized. No one was hurt, the boat was rebuilt on the beach, taken a mile back to its mooring and then Alex cycled home 10 miles.

John Head writes: "As far as the capsize is concerned we do not wish to be alarmist and the point of the story is that one must take care with the TIKI 21".

The third capsize occured near Falmouth in Cornwall. Ian Knowles set off from a sheltered mooring into strong winds. Just clear of the mooring the full force of wind hit the TIKI 21 and she capsized. She had full sail up, crew to leeward and sails sheeted home tightly.

The message is clear, the TIKI 21 is a small light boat and where larger designs tend to take care of the crew, sailing the TIKI 21 in heavy or gusty conditions, the crew need to take care of the boat.

We will have a full account from Alex Head in the next issue.

James Wharram comments:

Over 9 years during which the TIKI 21 has been sailing, there have been 3 reported capsizings. Compare this figure with the 23 foot HINEMOA which has a 20 year history with no capsizes. This is a design that rode out a hurricane, and which has made many long ocean voyages. Against this, the TIKI 21 has a capsize rate of approximately 1% or less. Should we regard this as too

Unfortunately, the new catamaran designers (many of them ex-trimaran designers fleeing from the capsizing trimaran image) moved into catamaran design in the first years of the 1980's and publicly and persistently derided the slower but more stable designs like the HINEMOA.

The TIKI 21 has a better power/weight ratio than the HINEMOA and is therefore faster in light winds. However, she is not as stable. Therefore more sailing consideration has to be given to the TIKI 21. Sitting on the lee-side in gusting force 6-8 conditions will lift a hull. If you are not fast enough, capsize will occur. Be warned!

BUYING AND SELLING REGISTER - BOATS AND GEAR - CONTACT MALCOLM COX, 6 WEETON TERRACE, WEETON, LEEDS, LS17 OBB U.K.

D Sails Manufacturer of Sails, Dodgers, Covers & Tarpaulins. Repair Service. **Tiki Deck Tents**

Trampolines

Trevol Business Park, Torpoint, Plymouth PL11 2TB.

Phone (0752) 813312 Fax 815465

EST SYSTE/

TO BUILD A BETTER **WOODEN BOAT YOU NEED A SYSTEM**



PREPARATION

It is important to build with wood that has been adequately dried. The moisture content of wood for composite should be as low as possible, ideally 12%.

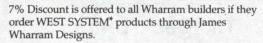
ENCAPSULATING WEST SYSTEM resins stabilize the moisture content of the wood, maintain a set standard of physical properties and provide excellent dimensional stability.

BONDING

The joint bonded with WEST SYSTEM epoxy becomes stronger than the wood being joined. Little clamping pressure is required to achieve a good bond.

CONSTRUCTION

WEST SYSTEM products eliminate the need for mechanical fastenings such as screws, bolts and rivets and therefore subsequent corrosion problems are non-existent in an all bonded construction.



*West System is the registered Trade Mark of Gougeon Bros. Inc.





WESSEX RESINS

AND ADHESIVES LTD

189/193 Spring Road, Sholing, Southampton SO2 7NY, England Tel: (0703) 444744 Fax: (0703) 431792

SP 1991

The only monthly journal in the world devoted entirely to news and views on multihulls

UK ANNUAL SUBSCRIPTION £18

OVERSEAS SUBSCRIPTION £25 or US\$50

For Air Mail to Europe add £6 or US\$10. For Air Mail to all other destinations add £10 or US\$20.

Cheques in Sterling or US\$ (drawn on a US Bank) Eurocheques in Sterling only. No credit cards. GIRO Account Nº 346 9050

PLEASE send me a year's subscription, starting with the issue NAME ADDRESS BLOCK LETTERS PLEASE)

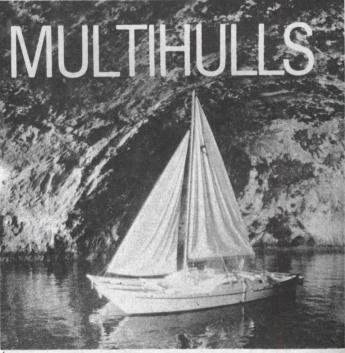
Please continue my subscription when it becomes renewable and bill me until I cancel subscription

published by

CHANDLER PUBLICATIONS LTD.

10 South Street, Totnes, Devon TQ9 5DZ, UK.

Multihull International is published at the very end of each month



January/February 1984 Cover Photo: Wade Doak's RAKA 'INTERLOCK' in Rikoriko Cave, New Zealand, with inside story: 'A Cat Among The Dolphins'.

MULTIHULLS Magazine brings you world-wide catamaran, trimaran and proa news. Timely articles on designs, buying, building, racing, cruising and safety of multihulls. Bi-monthly (6 issues per year).

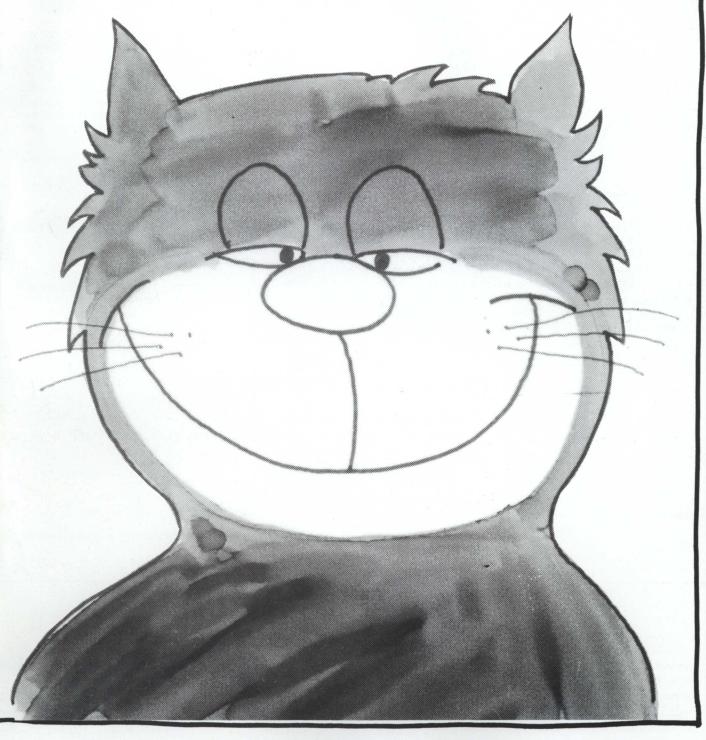
421 Hancock St. Quincy, (Boston) MA 02171, USA Tel: (617) 328-8181

SUBSCRIP	TIONS	
SOBSCIIII		
	1 year	2 years
U.S. Surface	\$18.00	\$32.00
Foreign Surface	\$22.00	\$36.00
Foreign Airmail	\$39.00	\$75.00
Payable in I	J.Dollars, b	ank draft

International Postal Money

Order or Visa/Mastercard

NINE OUT OF TEN CATS PREFER JECKELLS.



Wharram's reputation for specifying the world's finest equipment in their cruising cats is maintained by the appointment of Jeckells as their sailmaker. Jeckells' expertise in making superior quality cruising sails makes them the natural choice.

A choice that's open to any class of boat or catamaran. So let us quote you for a Lazybones Cruising Chute, headsail reefing or mainsail luff or Foot reefing systems.

Write, stating class of boat to the address below or see us at the London and Southampton boat shows.

Jeckells/D

Jeckells & Son Ltd, Wroxham, Norwich, NR12 8UQ England. Tel: (0603) 782223. Fax: (0603) 784161.

Editors Note

Often the Editor of the Sea People has little to do with the magazines 'flavour'. This issue is biased towards Ocean Cruising, particularly in heavy weather. We see how minimum ocean boats, the likes of the TIKI 26, and the larger Classic Designs cope with heavy weather. For those of us who have not yet dealt with gales and storms, this is a reassuring issue.

At the last A.G.M. Dave Skelhon stepped down as Editor of the Sea People and I have been asked to take over. On behalf of all P.C.A. members I would like to record our thanks to Dave, he produced a magazine we all looked forward to receiving. His production of three issues last year was no mean feat.

Dave produced the last three issues using a "desk top publishing system", now we are back to glue and scissors, this has allowed us to return to our previous format. Some features have disappeared with time and I would like to re-introduce them, Fishing, Chartering, Dolphins, Naturist sailing and Living from the Sea. Members with experience or ideas please write in.

Joke Snell of J.W.D. has suggested we build up a section on 'Green Materials' particularly thinking of more environmentally friendly paints and glues.

This whole area is rapidly changing as industry discovers a 'market' for these products. We would like to feed any developments through to members, so if you hear of anything, let us know.

Pass the magazine around, ask fellow builders and friends to join the P.C.A. The more members we have the more news and views we can include.

Where are the members from Africa, Asia, Eastern Europe, South America..? It is difficult for us to reach these places, but members must have contacts, let's ask, find out whom to contact and see what will happen.

A.V.

Membership

Please check that you have renewed your membership for 1991. The subscription is £8.00 for U.K. and European members, £10.00 for overseas members. Non-sterling cheques are often impossible to cash, it is best to send a £10.00 note, which can be bought from your bank. Send your subscriptions to the P.C.A. Secretary, Chris Sands (see address at bottom of this page).

Articles & Photographs

Articles, news and photographs for the Sea People send to 'Sea People', 40 Silvester Road, East Dulwich, London SE22 9PB England.

PLYMOUTH - CRESCENT HOUSE HOTEL -

P.C.A. MEMBERS (TIKI 21)

Peter and Lucy McDonald invite you to stay at their family run hotel, providing excellent value for money.

- ★ Discount to PCA Members
- ★ Licensed
- ★ Friendly atmosphere
- ★ Close city centre
- ★ Children Welcome
- ★ 50 yds foreshore
- * Overlooking Millbay Marina

Short walk from Queen Anne's Battery and Mayflower Marina. Nearby to Public Shipway.

U.K. Summer Meeting

PLYMOUTH - SATURDAY 10th AUGUST to 17th AUGUST

Following the great success of the 1990 meeting, it has been decided to repeat the venue and programme in the hope that we get a repeat of the weather!

Members interested in attending the event please fill in and return the slip below, including a S.A.E. if information is required. 1990 saw over 30 boats and almost 100 people attending, with 8 cats taking part in the cruise to the Scillies. The boat travelling furthest to the meeting sailed up from Southern Portugal!

I hope to see you in August!

Steve Turner

18 Garden Crescent,

Telephone: (0752) 266424

West Hoe, Plymouth,

Devon

PL1 3DA

CUT OUT & SEND TO: D. HENDER, 28 RIDGE PARK AVENUE, MUTLEY, PLYMOUTH PL4 6AQ.

I wish to attend the Summer Meeting. Please send me details of: CAMPSITES, MOORINGS, LAUNCHING SITES,

BED & BREAKFAST (Delete as necessary)

BOAT I INTEND TO SAIL/TRAIL MY

TO THE MEET

.......

PLEASE FORWARD or return to Chris Sands, Chards Orchard, Exeter Road, Kennford, Devon EX6 7TJ U.K.