

APRIL/MAY 2001

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racing

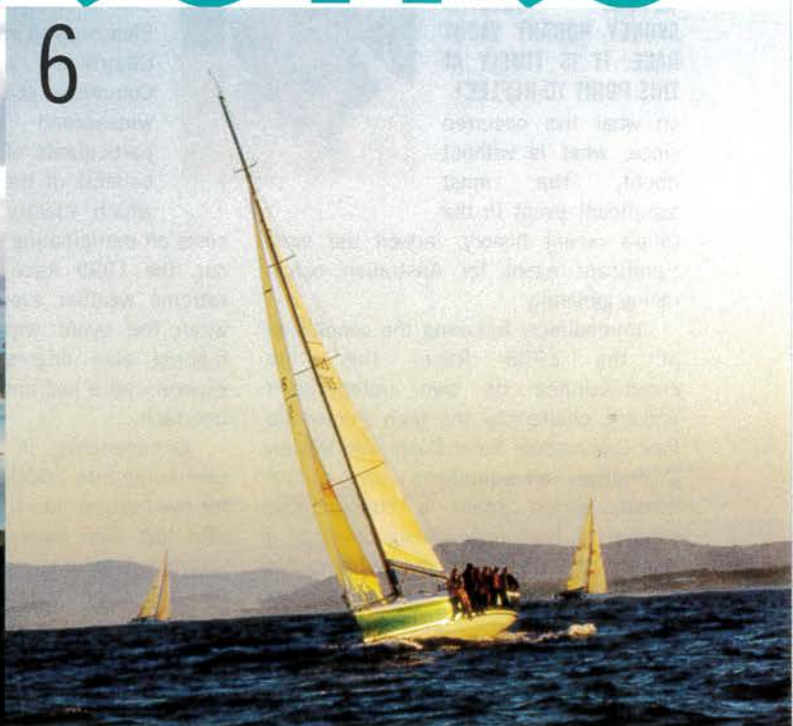
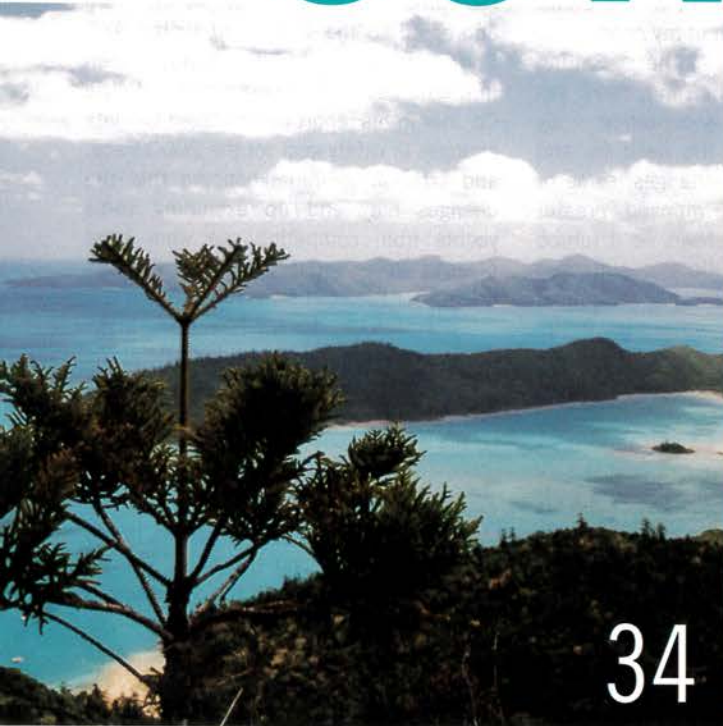
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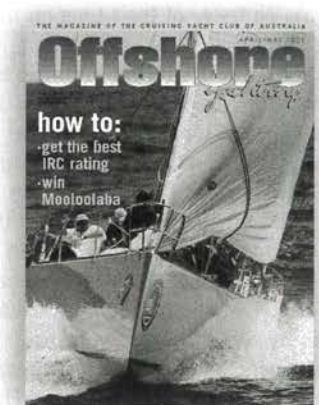
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THE VIEW OF DICK CAWSE'S VANGUARD THAT THE OPS FLEET DIDN'T GET TO SEE.
PIC: IAN MAINSBRIDGE

IT IS NOW TWO YEARS SINCE THE TRAGIC 1998 TELSTRA SYDNEY HOBART YACHT RACE. IT IS TIMELY AT THIS POINT TO REFLECT

on what has occurred since, what is without doubt, the most significant event in the Club's recent history, indeed the most significant event for Australian ocean racing generally.

Immediately following the conclusion of the 1998 Race, the Club commissioned its own independent enquiry, chaired by the then Immediate Past Commodore Peter Bush. The Review Committee, all volunteers, over a four month period spent a considerable amount of time interviewing crews of a significant number of competing yachts and third parties, and undertaking other specialist enquiries. This culminated in the publishing of the Review Committee's



improvements in safety requirements, and changes to the Club's management of the event. Pleasingly to me in my capacity as Chairman of the Sailing Committee at the time, there was widespread acceptance by participants of the need for and benefits of the changes, some of which clearly imposed greater

costs on participating crews. As it turned out, the 1999 Race did not suffer an extreme weather event, and at a time when the event was subjected to its highest ever degree of scrutiny, we experienced a fast and relatively incident free race.

Commencing in 1999 and then continuing into 2000, the Club prepared for the Inquest into the deaths of the six who lost their lives. Again, there were significant voluntary contributions made by some of our members to the preparatory phase and to and during the proceedings themselves.

two weeks before the 2000 Race. The Report contained 14 key recommendations, 12 of which were addressed to the CYCA and to the AYF. Some of them had already been implemented. The comments of the Coroner in his report necessitated two late changes to safety gear for the 2000 Race, and after some initial concern that the changes may end up excluding some yachts from competing, we were most pleased to eventually have all entrants line up for the start on 26 December.

The Club has, for the time being taken the stance in relation to the balance of the Coroner's recommendations that in the first instance, they are matters for consideration by the AYF. We are aware that the AYF has been addressing the issues, and anticipate that the results of its deliberations will be available shortly. Key issues are as to life raft specifications and the application of some or all of the Coroner's recommendations to Category 2 races.

The Coroner's Report contained some

The 1998 Race has forever changed the way in which the Club conducts its events. Safety, always of primary concern, has been improved.

Report in mid-1999.

The Report has been analysed elsewhere. Suffice to say that, given the Club's limited resources, it represented a significant step forward in understanding what occurred during the 1998 Race and making recommendations for the benefit of ocean racing and the safety of its participants. Indeed, the Coroner himself recognised the contribution made by the Report in his own Coronial Report, and stated that the examination of the 1998 Race by the Club rendered nugatory the need for him to make a large number of recommendations.

The Club owes much to those that gave so freely of their time on the Review Committee. The significant personal sacrifice of Peter Bush for the benefit of the Club during the first half of 1999 has already been recognised in the elevation of Peter to Life Member status of the Cruising Yacht Club of Australia.

Based on the Report, the Club implemented many changes in time for the 1999 Telstra Sydney Hobart Yacht Race. These initial changes enhanced the safety of those participating in many ways, including as to their education and awareness of critical issues. There were

The Inquest itself commenced in late March 2000 and ended up comprising almost eight weeks of formal hearings, broken into two parts, and finally concluding in August 2000. During the entire hearing we were represented by our lawyers and by Counsel, as were other interested parties including both the Australian Yachting Federation and the Bureau of Meteorology. The Club made a final submission to the Coroner in September 2000. The commitment of resources, particularly financial resources, by the Club during this extended period was immense. Our total legal costs of the Inquest alone exceeded \$500,000.

Prior to the Coroner issuing his own report, planning for the 2000 Telstra Sydney Hobart Race commenced in earnest. The Club made some further incremental improvements in safety, in part based on the evidence given in the Coronial hearings. A different organisational structure was adopted, and the Club was indeed most fortunate that Rear Admiral Chris Oxenbould AO RAN (Rtd) agreed to act as the Chairman of the Race Committee.

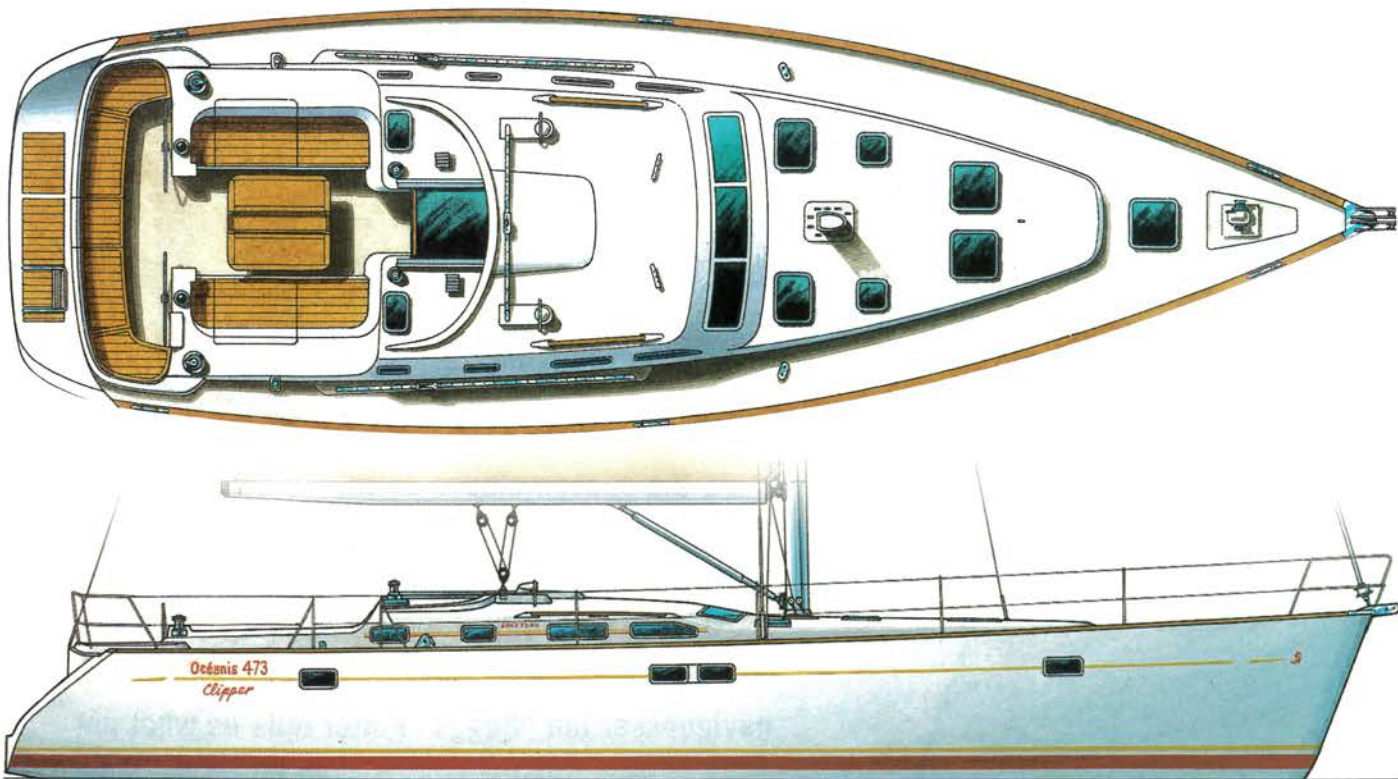
The Coroner finally issued his report

harsh criticisms of the Club and its management of the 1998 Race, and of other organisations and individuals. We are confident that, based on the work first of our own Review Committee and then subsequently of the Club's Board, Sailing Committee and Race Committee, the changes to our race management structure and our relationships with key third parties such as AMSA and BOM have since 1998 delivered (and will continue to deliver) to race participants the safest and best ever organised and conducted Sydney Hobart Yacht Races.

Regrettably, the Club finds itself embroiled in three separate pieces of litigation arising out of the 1998 Race, two brought by Club members against the Club. All are being vigorously defended, and we hope that all are satisfactorily resolved shortly.

The 1998 Race has forever changed the way in which the Club conducts its events. Safety, always of primary concern, has been improved. It is time to look forward, and seek to put a line under the events of December 1998.

May the winds continue to favour you in 2001 - especially those heading north in our Sydney-Mooloolaba Race. ❖



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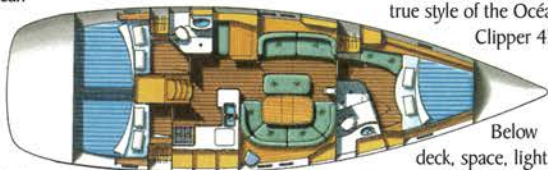
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THE FAST TRACK north

SYDNEY - MOOLOOLABA PREVIEW

As the season closes down, it's time for smart sailors to join the migration north in the Sydney to Mooloolaba race. Peter Campbell looks at the fleet for this year's event, weather-whizz Ken Batt tells us what winds to look for, and top naviguesser Ian "Buggs" Potter tells us what not to hit on the way.

TYPICAL MOOLOOLABA CONDITIONS -
SHORT TACKLING ALONG THE COASTLINE.
(PIC - DAL HARPER)

FLEET INCREASE EXPECTED

Often described as the most enjoyable long ocean passage race on the Australian East Coast, the 2001 Sydney to Mooloolaba Race is expected to see a significant increase in fleet numbers as a result of better programming of offshore events in New South Wales.

For the second year in succession, the Cruising Yacht Club of Australia and the Mooloolaba Yacht Club will join forces in conducting the 469 nautical mile race which Middle Harbour Yacht Club had conducted from 1964 to 1999. MHYC is now involved with the Coffs Coast Yacht Club in conducting the Coffs Coast

Sail Week.

Mooloolaba Yacht Club has gained sponsorship for the event, which will be known as the Forrester Properties Sydney - Mooloolaba Race in association with Maroochy Shire Council.

Fortunately for both events, the clash between the Coffs Coast and Mooloolaba events that occurred last autumn will not be repeated this year. The Coffs Coast Sail Week will be held from March 23-31, leaving yachts a week to return to Sydney for the start of the Mooloolaba Race on the following Saturday, April 7.

The Overall IMS winner of the 2000 Telstra Sydney to Hobart Race, Kevan

Pearce's Farr 47, SAP Ausmaid, will be competing, giving her sailing master Roger Hickman the opportunity to win his fifth Blue Water Pointscore.

Joining SAP Ausmaid is expected to be 2000 Telstra Cup and 2001 Pittwater-Coffs Harbour Series winner Nips 'n' Tux, Howard De Torres' imported IMX-40, along with other recent Telstra Sydney to Hobart winner Yendys (Geoff Ross' Farr 49), the Farr 52OD Loco (David Lowe and David Coe) and a line-up of Farr 40 One Designs and Sydney 38s.

Last year's IMS Overall winner, the Beneteau 40.7 Fruit Machine, may be back under new ownership (John

IT'S THAT TIME OF THE YEAR AGAIN – TIME THAT YOU GOT WEATHERWISE IN READINESS FOR THE SYDNEY TO MOOLOOLABA RACE. KEN BATT FROM THE BUREAU OF METEOROLOGY OFFERS SOME TIPS.

With the sub-tropical ridge (STR), or belt of high pressure, normally positioned south of Sydney at this time of the year, racing to Mooloolaba can either be relatively easy under (say) SW or SE flow, rather tricky under a sea breeze/land breeze regime, or a mix of the lot!

You should keep a close eye on the position of the STR, and for that matter the general weather pattern, commencing on a daily basis at least a week prior to the race. This allows you to get into phase with the weather or get into “weather sync” as some people call it. To achieve this you will have to rely on the daily newspaper weather map, or better still the Weather by Fax (an Infobox product) to monitor the situation (latest surface weather map 190 2935210, 24 hr forecast chart 190 2935211, 4 day forecast charts 190 2935002 and directory on 1800 630100 and many, many others at around 66 cents per minute. For those lucky people with Inmarsat, access to the Weather by Fax can be achieved by dialling 61 3 92738 xxx, where xxx is the last three digits of the 1902 service. Charges for this service may be higher than 66 cents per minute.

You can also use your computer to dial-up the Bureau's internet page, <http://www.bom.gov.au>, to obtain the latest weather map and forecasts.

The Coral Sea area will have to be watched with great interest as tropical cyclone activity can be on the increase at this time. This tropical cyclone season could still have plenty left in it! You have been warned!

Once you have established the position of the STR, The rules are as follows: there is general easterly windflow to the north of the STR, a westerly flow to the south and light winds in the middle. With light synoptic winds, local winds, (such as the sea breeze and the land breeze) will tend to dominate.

THE SEA BREEZE

The sea breeze should be a regular

occurrence at this time of the year under slack pressure gradients or associated with north through west to southwest 900 metre winds. North to northwest 900m winds give us the better sea breezes, all things being equal. The sea breeze at this time is generally less intense than its summer colleague. It becomes more regular as you head north. It commences during the late morning/early afternoon after an overnight land breeze.

The most common sea breeze direction along the NSW/QLD coast is from the NE, but this can be modified locally by the orientation of the coastline as well as by the strength of the sea breeze.

THE LAND BREEZE

The land breeze starts to become a more dominant overnight feature of the race track at this time, especially under slack pressure gradients and also night-time temperature inversions over the coastal strip. To benefit fully from this breeze, one will have to be positioned within a few miles of the coast especially from around 2200 hrs onwards (a little earlier on the northern NSW, southern Queensland coasts). Its direction will vary between SW and NW depending upon where you are along the coast and typically its speed will vary too. Along the coast it will be strongest near river valleys, high mountains close to the coast, and over the southern Queensland coast.

THE COLD FRONT

Cold fronts at this time of the year are generally less intense than their winter counterparts and hence often still fairly shallow. This means that winds behind the front should still be southerly to southeast. Be aware that an intense front may rear its ugly head, in this case winds behind are southwesterly on average and can be quite strong. As a general rule, NE to NW winds ahead of the front will turn SW to SE across the state as a high pressure system moves eastward behind the front, then back either rapidly or slowly to the NE as the high establishes itself in the Tasman Sea.

You should be on the lookout for a “surge”, a sharp increase in wind speed, with any south to southeast flow behind



McDougall) and with a new name (Koolewong) while the two New Zealand-built Cookson 39s, About Time (Julian Farren-Price) and Occasional Coarse Language (Warwick Sherman) are also likely starters.

While last year's line honours winner Wild Thing will be on her way to Europe, past line honours winner and race record holder Brindabella will be racing to Mooloolaba along with the much improved Open 60, Xena, and possibly another former line honours winner, Marchioness.

- Peter Campbell



LEFT – LIGHT BEATING ALONG THE NSW NORTH COAST. (PIC – DAL HARPER).
CENTRE – TACKING POINT AT PORT MACQUARIE IS A NOTORIOUS PARKING LOT. (PIC – CARTOSCOPE).
RIGHT – 2000 SYDNEY – MOOLOOLABA WINNER FRUIT MACHINE WINS THE START. (PIC – IAN MAINSBRIDGE).

the front. The warning should come via the forecast. Surges are accompanied by strong pressure rises over southeastern Australia. The stronger winds may be observed a number of hours after the arrival of the cold front or even the next day. A band of showers often marks the onset of a surge.

Low cloud can develop in any southerly stream along the coast, leading to showers or drizzle if the stream is deep enough.

WEATHER PROBLEMS

Some weather problems at this time of the year could be:

- The East Coast Low can be a problem, especially a late tropical cyclone (as mentioned above) or a tropical low that has moved south from Qld waters. Imagine running into the situation off the northern NSW coast/southern Queensland coast which occurred over the period 15 to 17 Feb 1996, which the master of the Q.E.2 described as some of the worst weather that he has ever encountered. (On 11th September 1995 this vessel encountered maximum wave heights around 29 m coupled with maximum wind speeds of at least 125 knots near Newfoundland. These conditions were associated with Hurricane Luis). For two days the ship, plying between Brisbane and Sydney, encountered gale to storm force winds from the south and seas between 10 and 20 metres! Extreme running conditions for yachts racing north



to say the least! This was an east coast low.

- Thunderstorms may occur with or ahead of a cold front. Their problems can be associated with very gusty, erratic winds, large hail, very heavy rain and from time to time, waterspouts (must avoid these at sea!) over the water and tornadoes over the land. Keep your eyes open to the west for development along the mountain ranges as thunderstorms are steered by the winds at around a height of 4 to 5 km above the ground, which on average over coastal NSW and southern Queensland they are from the west. This means that storms which develop along the ranges will normally move toward the coast, killing the sea breeze that may have been blowing for most of the afternoon. The surface wind at the time is replaced by short period wind gusts which are known as squalls. These may cause a lot of damage to vessels. Squalls can be 60% or more than the

average wind speed. Be aware that even a non-severe thunderstorm or heavy showers can create problems, especially from a wind point of view. The moral of the story is, DO NOT trust any thunderstorm or heavy shower cloud.

- Strong to Gale-force westerlies that can develop behind an intense cold front. At times a low pressure system (wave low) can develop on a cold front which is moving eastwards across NSW. This situation could lead to strong to gale-force NW winds developing ahead of the system.

- With a fairly straight coastline and few offshore reporting points it is often assumed that coastal stations are representative of conditions at sea, which may be far from the case. Wind speeds may be 25% to 50% stronger than over the land. The extent of sea breezes seaward is not well known.

- The East Australian Current (EAC)



is generally felt by yachts racing north at this time. It brings warm water from the Coral Sea into the cooler Tasman Sea, runs with speeds up to 4 knots around the continental shelf, and can spawn a number of eddies to the south of the main current. The situation where the prevailing wind opposes the ocean current should be watched very carefully as it can produce a very nasty seaway.

- The NSW/Southern Queensland coasts are largely exposed to deep ocean conditions. Even when the local weather pattern is unfavourable for swell generation, a tropical or extra (outside of) tropical system sometimes thousands of kilometres offshore has the potential to produce a moderate or heavy swell along the NSW/Southern Queensland coasts with little warning. A deep low located in the Tasman Sea will usually generate a south to south east swell (sometimes east) along the NSW coast. The sea wave is produced by the local wind blowing at the time and so its height is a function of both wind speed and water depth.



GENERAL

Your race strategy will of course be initiated and changed by the prevailing wind and ocean current conditions. Never just hang in close to the coast for the heck of it, just because someone told you that this is the only way to go fast to Mooloolaba. Assess the weather and ocean current situation very carefully because there just could be a chance that the wind say 10 to 15 miles offshore could be 10 to 15 kt stronger than the wind closer inshore (a good example would be strong westerly flow coupled with little or no current).

Get as much weather information that you can from the many sources available before and during the race e.g. your visual observations, Weather by Fax, Penta, VIS, HF weatherfax, Coastal Patrol, Coast Guard and the World Wide Web via your home-based PC (before you sail) or your suitably equipped onboard laptop or PC. For example the Bureau's home page is at <http://www.bom.gov.au> and the CSIRO Marine Labs are at <http://www.marine.csiro.au>

Log weather elements, such as pressure, wind, cloud, sea and swell so that you can infer trends and hence fine tune the weather forecast if the need arises.

cont'd p12

3DL DELIVERS RESULTS

2001 Melbourne Farr 40 Regatta

1st, 2nd

2000 Strathfield Pittwater to Coffs Harbour Series

IRC 1st

IMS 2nd, 3rd

PHS 1st

2000 Farr 40 One Design Australian Circuit

1st, 2nd, 4th, 5th, 7th, 8th, 9th

2000 Telstra Sydney to Hobart

IMS 1st, 3rd

2000 Telstra Cup

IMS 2nd, 3rd, 4th, 5th, 6th, 7th, 8th, 9th, 10th

IRC 1st, 2nd, 3rd, 4th

Farr 40 1st, 2nd, 3rd, 4th

2000 Ord Minnett

IMS 1st, 2nd, 3rd, 4th

IRC 2nd

Farr 40 1st, 2nd, 3rd, 4th, 5th, 6th

2000 Hahn Premium Hamilton Island Race Week

IRC 1st

Farr 40 1st, 3rd, 4th, 5th

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Models: Natalie Walton - crew member on Loki, Matt Day - Youth Sailing Academy Coach, Rod Mackay - CYCA yacht broker
Location: Shot on the CYCA marina, Rushcutters Bay, on board the Farr 50 Yendys (Geoff Ross), overall winner of the 1999 Telstra Sydney to Hobart Yacht Race, and the Beneteau 40.7 Fruit Machine, owned/skippered by CYCA Rookie of the Year Neill Whiston

CLUB OF AUSTRALIA

KEY TO HOBART YACHT RACE



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- Fatal Storm Book \$29.95
- Sydney to Hobart Ties \$22.50
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 White (also in Navy) Waffle Weave Polo S-XXL **\$75**
- In Middle:
 CYCA Short Sleeved Sailing Jersey (New) 100% Cotton in Club Colours S-XXL **\$103**
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Total

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Signed _____

north with Buggs

IAN "BUGGS" POTTER IS ONE OF SYDNEY'S TOP OCEAN RACING NAVIGATORS, AND A WINNER OF "TWO OR THREE" MOOLOOLABA RACES. WE ASKED HIM TO TAKE SHOW US THE FAST TRACK NORTH.

"Most important in most people's mind is the paranoia about the current. Most of the times the current is more importance than the wind, but in a proper gradient breeze be prepared to stay offshore, but I would never go out past the 20 fathom line. In a bigger boat the current doesn't matter as much.

Monitoring the current is hard in a lot of boats because the current read-out can vary from tack to tack, because the GPS isn't set up for leeway and the instruments aren't calibrated properly. Downhill they tend to be more accurate.

I do a plot every hour, calculating the distance travelled between GPS fixes and working out what the difference is between the instruments and the GPS. But the best instrument of all is a chart plotter, because you can actually see the "course made

good" curve sag when you hit current.

SYDNEY TO PORT STEPHENS: The best course across Stockton Bight often depends on the time of day that you arrive there. Quite often at night you get an onshore breeze to sea, and offshore breeze inshore, and a calm where they fight in the middle.

PORT STEPHENS TO SUGARLOAF: If a land breeze is blowing, you can hit the beach after Broughton Island. I stay outside Broughton- I've tried to go inside in the early morning and it was a disaster.

SUGARLOAF TO CROWDY HEAD: There's a high hill at Sugarloaf and you might lose the wind but the current is strong here, so you normally have to hit the rocks and accept the lighter breeze. In a nice strong southerly you might lose more than you gain by arcing around the shore in the bays north of the Sugarloaf.

MERMAID REEF: The reef is in the way, whether you pass it inshore or offshore. Which way you go is related to the breeze on the day. There is plenty of room inshore but I tend to go outside. After Mermaid reef, you have to hit the beach a bit more because the 20 fathom line comes in closer to the shore.

TACKLING POINT TO SMOKEY CAPE: Getting past Tacking Point, Point Plomer, Korogoro Point and Smokey Cape is always a dogfight. I'm normally pretty well guided by making sure I stay inside the 20 fathom line. You can go right into these headlands despite the fact that they are quite high, without losing the wind. In a north-easterly quite often the wind will curve around and lift you close

to the shore. Even in a land breeze you're normally okay close in, but in a proper gradient wind you may find more breeze offshore.

The rocks are well marked, but many of the charts are inaccurate in latitude and longitude- you must check the legend on the charts to see how much they vary from the actual position as given by GPS.

After Smokey Cape, most people get around the corner and go inside the bay to get out of the set.

SOLITARY ISLANDS: I've gone through the Solitarys numerous ways, but now I have a pretty standard route. Normally I go just inshore of South Solitary, miss a couple of rocks to the north of the island, then go just outside North West Solitary and then inside North Solitary. Sometimes in a moderate southerly you can get no breeze along the shore in this area - it often looks soft, especially at night.

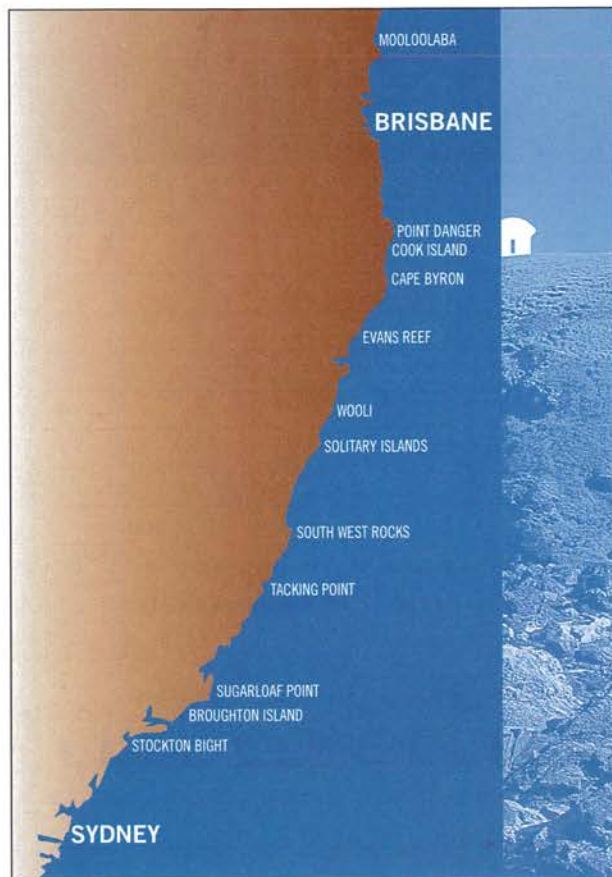
From the Solitarys, it's up the beach to Wooli. I normally go outside South Evans reef because it's easier and then go inside or outside North Evans Reef depending on the current - it doesn't matter too much.

CAPE BYRON: I go in close to Cape Byron all the time, close enough to throw food at the goats. There aren't any rocks that aren't well marked on the chart on this coast.

DANGER REEF, COOK ISLAND: Make sure you don't hit Cudgen Reef, because a fair few boats have! For the last few years I haven't worried about going inside Cook because the boats I've been sailing on have been too deep.

POINT DANGER: The course from Point Danger to Point Lookout depends on the weather and the set. There's normally current off Point Lookout, so I normally go inside or just outside Boat Rock and then hit the beach. The passage between Boat Rock and the rocks on the shore is okay, but if it's pitch black go between Flat Rock and Boat Rock.

MORETON ISLAND TO FINISH: Stay fairly close inshore going up Moreton Island - watch out for the sandbanks off South Passage. The wind is guaranteed to change going across Moreton Bay. Pay attention to the tides which will be taking you up or down from your course as you cross the bay. ❖



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VANGUARD

at the front
in ocean point score

THE CYCA'S PRESTIGIOUS OCEAN POINT SCORE SERIES WAS DOMINATED BY THE DEFENDING CHAMPION, DICK CAWSE'S Vanguard. The Cawse/Lyons 46 won both IMS and IRC and finished third on PHS in the seven-race series. On the way she won four races in IMS, four in IRC, and one in PHS.

Both IMS (16 entries) and IRC (15 entries) were dominated by the same four boats; Vanguard, AFR Midnight Rambler, the Cookson 12 Occasional Course Language (Warwick Sherman) and the Farr 1020 Forzado (Geoffrey Phillips). It says a lot for the accuracy of the rules that the same boats ended up at the top of the two tables.

In PHS (39 entries) the Mummery 45 Icefire (Terry Mullins) won both the last two races to come from behind to take the title. Second was the Lidgard 38 Hot Chilli (Alan Cox) and third the ever-consistent Vanguard.

"LAUNCHED AT CHRISTMAS '98, VANGUARD IS A BEAUTIFUL LOOKING YACHT AND HAS BEEN QUICK FROM DAY ONE. THE DESIGN philosophy was for a clean, fast, simple to sail boat, upwind oriented, but not specifically designed to a rule. The result has been more than we had hoped for."

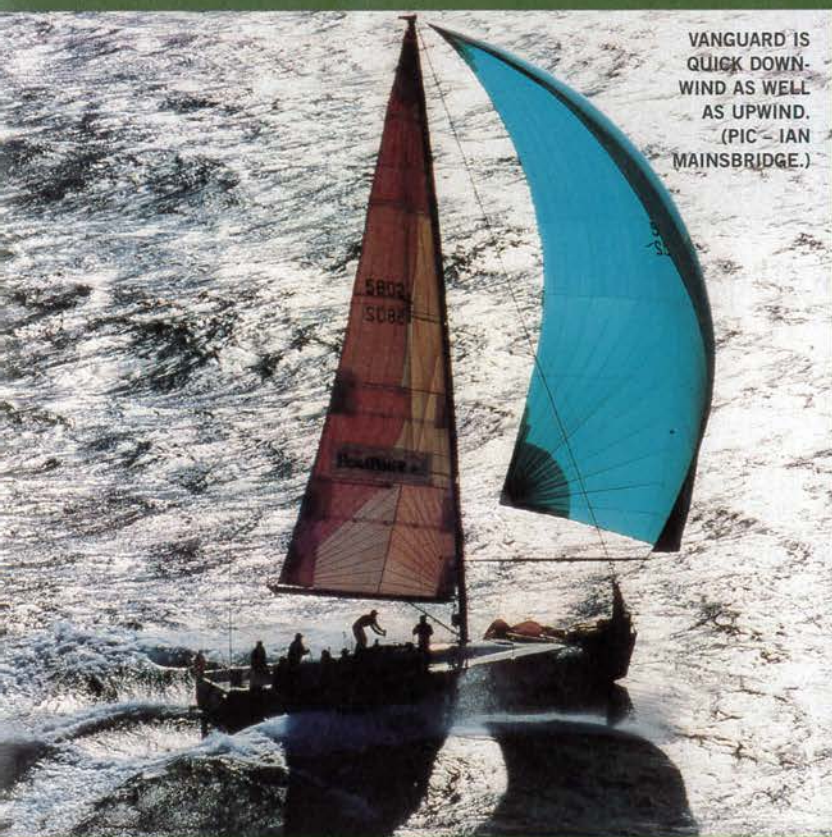
"The boat certainly is simple, with non overlapping headsails, no runners, swept spreaders and carbon masthead rig; we are fast upwind and down in both light and fresh conditions. The masthead rig has been a real plus in this configuration, overcoming any headstay sag in the runnerless sailplan and it is also of great benefit with non overlapping headsails."

"With Peter and John Messenger as the principal helmsmen, Ian Broad from Hood Sails on main, Paul McInerney forward hand, Craig Garnett and Col Bloomfield as trimmers, Brad Kellet on mast and trim Steve Bird, Martin Paget in the pit, and Glen Miles navigating, we certainly had a very competent crew on board, however the masthead rig makes it very easy to 'change gears' in varying conditions upwind to enable the boat to stay consistently fast. You certainly don't need a crew of superstars & rocket scientists on board to get results."

"I don't think there were any particular stand-out reasons for our result other than keeping mistakes to a minimum, although we did have one premature start (Mike Fletcher always said if you don't have one PMS in 10 you're not trying). Consistency was the name of the game. We did have great ding-dong battles with Wild Thing boat for boat which really kept us on our toes for the whole series."

"Vanguard was actually built as a test bed for my new Tacking Steering System which has been gradually refined and works well. We are now in production and marketing the system both domestically and overseas. We have the design completed for a bigger version of Vanguard using the same concept which should be even more exciting, so she is now for sale."

-Dick Cawse



VANGUARD IS QUICK DOWNWIND AS WELL AS UPWIND. (PIC - IAN MAINSBRIDGE.)

1ST OVERALL PHS – ICEFIRE (MUMMERY 45) – TERRY MULLINS

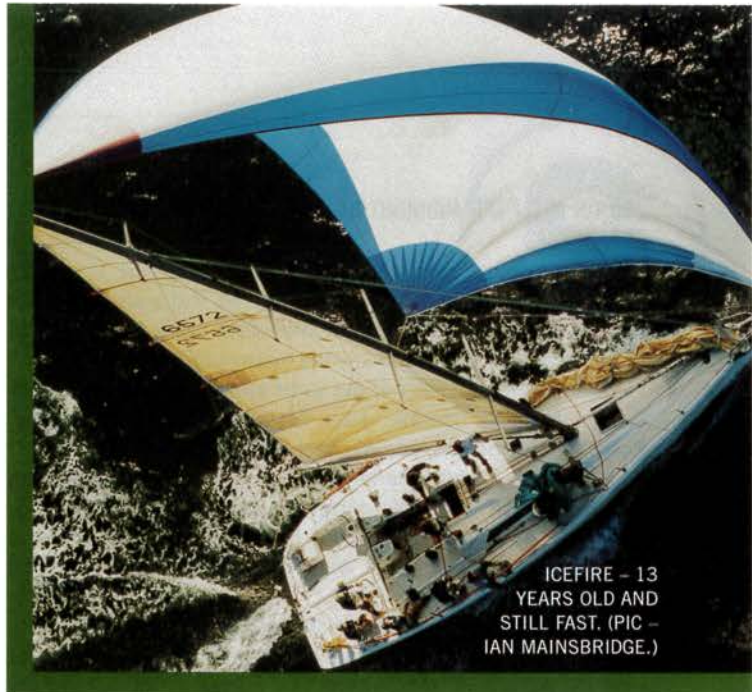
"I think it was the commitment on our crew-work and our team-work that gave us the win. We were always the first of the bigger boats on points. We were behind four or five smaller boats (we were most concerned about Hot Chilli, which had a pretty good crew) but we knew that we would get them in the Wollongong races, especially the Sydney to Wollongong race. We knew that we would complete the race in the early hours of the morning and the smaller boats would be left at sea when the wind died around dawn, and that's what happened. We had a good race on the way down, staying up with Foxtel most of the way, and the smaller boats were left at sea in the morning."

"Icefire is an amazing boat – in the right conditions it's the most exciting boat to sail, but she's very twitchy. She is 13 years old now, but she's full carbon and in perfect condition. I've replaced all the winches, blocks and clutches, nav and electronic gear, replaced the rod runners and backstay with Vectran and spectra, and fitted a new set of Doyle Fraser D4 sails."

"It's been competitive under all systems; I've calculated the series and we probably would have come 2nd on IRC, and the boat can still have its day on IMS when there's a lot of reaching."

"The crew for the series included sailing master Andy Prior (of Priority Boating Services, who maintained and prepared the boat for each race), Peter Buckley, Adam Smith, Bill Parshall, Natasha Henley-Smith, Sean and Julie McKeon, Andrew Buchanan, Andrew Warner, Dean Montenegro, Graham Fraser, and Trent Washington."

"Neville Wittey joined as tactician for the two Wollongong



ICEFIRE – 13 YEARS OLD AND STILL FAST. (PIC – IAN MAINSBRIDGE.)

races. I only started sailing two years ago so I've been getting a lot of lessons from Neville, going out on an Etchells once a week."

"I'd like to thank the club because a lot of members, especially Roger Hickman, have given me a lot of help to achieve the honour of winning such a prestigious series. Icefire is now for sale as I'm close to purchasing a new boat; something bigger and faster in the IMS division, because I think it will remain the most prestigious class."

- Terry Mullins

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2ND ON IMS - AFR MIDNIGHT RAMBLER (HICK 35) ED PSALTIS AND BOB THOMAS

"We were happy with second, because Vanguard is a very competitive boat and is sailed very well. We had a big win in the Bird Island race in a good 15-20 knot north-easter that stayed in all night; that win was probably the main reason we got second."

"We had the nucleus of the same crew all the series; Arthur Psaltis, Michael Bencsik, John Whitfield, Grant Healy, Chris Rockelle, Don Brooks, and Michael Egan.

We actually prefer the longer races of the Blue Water Point Score, because we push ourselves pretty hard all the way. Unfortunately this year the Lord Howe race fell on the same weekend as one of the Blue Water races, but we still had good racing in the Ocean Point Score."

"We had a very poor performance on the way down to Wollongong, but we got a third on the way back in a big boat race; we got a good start, got around Flinders Islet in company with much bigger boats. When the light south-easter died and an east-north east went we got the kite down and the light genoa on at the right time, where some boats got caught. That race put us on the same points as Occasional Course Language and we took second on countback."

"We didn't do as well on IRC as IMS but I think the boat is competitive under IRC. It just didn't go our way this year - in a couple of races we got carved up by the big old boats on IRC."

- Ed Psaltis

2ND ON IRC - FORZADO (FARR 1020) GEOFFREY PHILLIPS

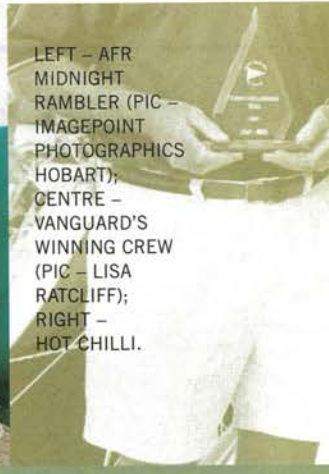
"Forzado is a Farr 1020, very much a standard boat with good sails and a keen crew. I bought the boat in 1986, after sailing with Geoff Stagg from Farr International. At the time I was living in California and we were very competitive there until I moved to Australia and brought the boat with me."

"The boat has had no optimisation under any rule, but we've set the boat up well, with good sails from Halsey Lidgard in Auckland and a very clean finish on the bottom - we finish her off with 500 grade wet and dry which is something I'm keen on because of my dinghy sailing background. You see a lot of boats on the Harbour with great sails but rough hulls."

"The IRC seems to like medium displacement, simply-rigged boats and that's what the 1020 is. She's not an IMS boat and all through the season we seemed to be one or two places further back in the IMS standings than in IRC."

"We sailed reasonably consistently the whole time. Our best race was the Port Hacking race, where we got second to Loco on IRC. It was 8 to 14 knots and shifty, conditions where the ability of the boat to change gear was important."

"The core crew included Bruce Rowley (trim), Susan O'Laughlin (foredeck), Victoria Anderson (main), and Greg Collyer (tailer). One of the nice things about the crew was that it was exactly half and half; I encourage mixed crews and the boat likes it; women tend to be easier on the gear than a gorilla bouncing around!"



LEFT - AFR MIDNIGHT RAMBLER (PIC - IMAGEPOINT PHOTOGRAPHICS HOBART); CENTRE - VANGUARD'S WINNING CREW (PIC - LISA RATCLIFF); RIGHT - HOT CHILLI.

3RD ON IMS AND IRC - OCCASIONAL COURSE LANGUAGE (COOKSON 12) WARWICK SHERMAN.

"Occasional Course Language is a Farr designed Cookson 12, from the same moulds as No Fear but with a non overlapping headsail suited more to the IRC rule because I believe the IRC rule will dominate sailing over the next few seasons. Grant Simmer from Norths (we have a complete North 3DL inventory) with advice from Hugh Welbourn suggested we go for oversize spinnakers and longer pole and a slightly smaller mainsail for IRC. The boat is relatively light and off the breeze/downwind are the favoured points of sailing. Under IMS we are penalised for the oversized spinnaker, so unless we get a lot of downhill we are somewhat disadvantaged, but it is interesting to be able to race and compare results under the two systems."

"For us, the season started in a bit of a rush. The first race was the 14th October and the first time the boat actually sailed was the afternoon before! We did well in the first two races; one OPS, one SOPS, then we entered and won the Lord Howe Island race on IMS overall. We were actually second over the line, six hours behind the Sydney 60 Eureka."

"After that we found it hard to keep the boat going fast in all conditions in the short races, but we seemed to settle in better on the longer races. I was becoming a little frustrated with the performance of the Sydney 38s and it really wasn't until the Wollongong-Sydney race that the crew and I felt that that we were getting into the groove and that they were gettable- tough competition but gettable."

"We normally sail with nine, which gives everyone a specific

2ND ON PHS- HOT CHILLI (LIDGARD 38) ALAN AND LINDA COX

"Hot Chilli is a Duthie Lidgard design, extensively modified by the builder, Thomas Borrmann and built of GRP with a cedar core. She was launched in New Zealand in 1998 and sailed over later that year."

"She's a real compromise – I like to race, to take part, but she has to earn her keep when we cruise, so we've got a lot of things you don't normally see on a racing boat- a full cruising fit out, central sheeting on a furling boom, electric halyard and anchor winches, and a headsail furler to name a few!"

"The boat weighs nearly seven tonnes and upwind we suffer because of the small fore-triangle, until it starts to blow. Cracked off a little and downwind, we are quite competitive."

"We usually sailed with eight crew, a mixture of experienced offshore sailors and a few beginners. They were chosen from Mat Cox, Dan Clemensen, Peter Pangas, Greg Houston, Scott McRae, Mike Hopkins, Barbara Elliott, Werner Steyer, Cheryl Graham, Steve Hobbs, Steve Wagstaffe, and Hugh McCrystal."

"I'm pretty happy with the series. Our boat is a passage maker and the Ocean Point Score races give us time to get it wound up over reasonable distances. The races are spread out and don't place heavy demands on getting crew each week."

"Within its limitations, the PHS handicapping system seems to work quite well; Icefire came from no-where and sailed brilliantly to win the last two races. We haven't been anywhere near winning a race this year- it's consistency and perseverance that does it for us." ❖

- Alan Cox

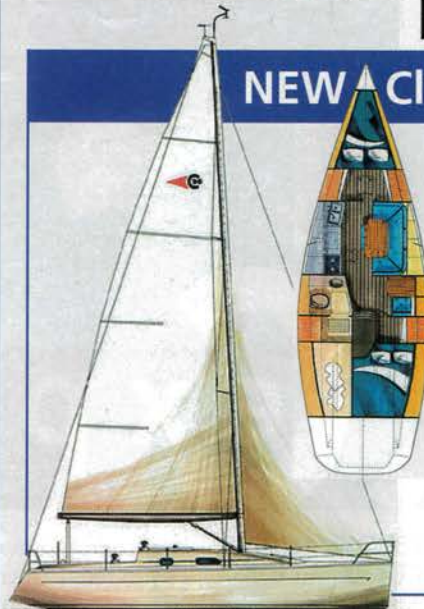


New Clubman SUPER 30

TOP PERFORMING 30' IRC BOAT, HAMILTON ISLAND 2000



NEW Clubman 36



Specifications

- LOA: 11m
- Beam: 3.5m
- Draft: 2.16 m
- Displacement: 3950kg
- P: 13.7m
- E: 5.0m
- J: 4.24m
- I: 13.7m
- Construction: PVC cored high performance E glass laminates, carbon rudder, steel/lead keel all to ABS

job. Mike Duggan was tactician, Andy Bower bow, Sarah Paul pit, Gordon Smith main, Marcus Hodgson mast, Mick Darda, Robert Perey and Gerard Maret trimmers. Others including George Waldthausen, Sean Welsh and Richard Sharman have also sailed with us from time to time."

"The Ocean Point Score has actually been a bit of a blur, a mix of pleasant sailing and good competition. If there was a defining moment it was the race back from Wollongong. Vanguard, a very well sailed boat ideally suited to the conditions, beat us by a mere 30 seconds on IRC corrected time. To be that close was great. I actually phoned each of the crew the next day to congratulate them on their efforts and continued enthusiasm."

- Warwick Sherman

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J/29 (LEFT), THE
FIRST 31.7 (CEN-
TRE) AND THE SUN
FAST 32 (RIGHT)
HAVE ALL WON
TOP-CLASS IRC
REGATTAS. RULE
CHANGES HAVE
CHANGED THE RAT-
ING REDUCTION
FOR THE ROLLER
FURLER ON THE
FIRST 31.7.
(PIC - STEPHEN
MUNDAY/ALLSPORT)



IRC explained

Yacht design
IRC certificate

THE IRC IS STARTING TO BECOME THE MOST POPULAR RATING SYSTEM IN Australia. Perth yacht designer Malcolm Runnalls, formerly of the internationally-successful offices of Britain's Rob Humphreys and Italy's Sciomachen, has worked with the rule since its inception 17 years ago and is the IRC Co-ordinator for Australia. Who better to talk us through an IRC certificate?

It must be noted the following views are not in any way official, as the IRC is a

secret rule known only to the British and French rating offices.

"It's hard to optimise a boat for IRC racing" says Runnalls, "because you don't have a published formula to work with and the idea of the IRC is to prevent people from distorting their boats to reduce their rating. As the rule says, 'the spirit of IRC requires that owners and designers shall not seek means of artificially reducing the rating of a boat, e.g. increasing performance without a corresponding

increase in rating.' In fact the rating office has now officially limited the number of trial certificates each boat is allowed per year, to stop people optimising or designing by numbers. So be sceptical of any expert who suggests that they have a VPP programme that will optimise your boat to this rule.

I actually don't like to use the word "optimising" for IRC, because it sounds like people have to throw money at designers like me to find holes in the rule.

Under the IRC, the ideal is simply to remove any penalties that could be artificially lifting your rating. When people query their boat's apparently high rating I get them to show me their certificate and nine times out of ten there are a couple of obvious factors.



The IRC unabashedly says that it's primarily designed for dual purpose cruiser-racers. The rule is modified as years go by, to reflect what's normal in the fleet. If your boat's extreme, either super light or super heavy, you're a bit out of contention in many conditions.

Having said that, the results for IRC racing internationally show that boats of just about any sort can win on their day. A couple of years ago the UK's biggest offshore race, the Fastnet, was won by an Open 60 while the biggest day race, the Round The Island, was won by a Folkboat.

THE BASICS

There are three basic steps to check before you look any further into your certificate. The first step is to check your certificate and make sure that all the measurements are correct. It sounds simple, but mistakes happen quite often!"

The second step is to check your sail measurements. Spinnakers shrink and expand a surprising amount, particularly in tropical conditions of high heat and humidity. The spinnaker on a 13-14m yacht can stretch up to 0.3m on a tropical day, which is enough to lift the rating a point or two. Common sense suggests that you don't "optimise" too much here as if check measuring is done in non ideal conditions, you run the risk of being protested. Headsails, particularly mylar sails, tend to shrink as they age. Having

IRC 2000

YACHT: SHIPWRECKLESS	SSS BASE VALUE23	
SAIL No.: AUS 249	ADJUSTMENT VALUE0	
CERT No.: K- 1234/01	SSS NUMERAL23	

TCC: 0.913 2001

Design: SPENCER 28	(B) { Series date: 1968 (A) Hull Factor: 7.3	
Type: Bermudian sloop	(R) { Age date: 1998 (I) Rig Factor: 1.04	
	(R) Crew Number: 8 (H) O/h Factor: 1.000	

Issue: NSW: New
Notes: Measured & Weighed
Notes: None

Hull:	Main:	Mizzen:	Spinnaker
(C) LOA8.51	(J) FP9.1	PY0.0	(O) SPA ...32.12
(C) LWP7.5	(K) LE3.3	EY0.0	(P) SPL3.2
Beam2.52	(K) J3.2		
(D) Weight ...2205 (L) FL ...8.7			
(E) (empty)			
(E) IRC Displacement	(M) LL ...8.58	LLY0.0	
.....2537	(N) LP ...4.8	LPY0.0	
(F) DLR1.87	(N) : Lead single keel		
(G) Draft1.48			

Inboard engine: Weight...67kg 2 blade folding/feathering propeller

No more than 3 downwind sails carried
Spinnaker pole(s) only
2 spreader (sets) 1 jumper (sets) 1 Runner (sets) 1 Checkstay (sets)
Weight include. batteries / cushions No water ballast carried
MTW/MHW not exceeding 1.36/ 2.54 (Q) 0 kg internal ballast

Certificate (not) issued by the RORC Rating Office and INVALID from 33/13/2001
Expires 30-16-2000 unless superseded or invalidated by IRC Rules and Regulations

I accept the dimensions shown on this certificate and agree to report all subsequent changes and any errors found at a later date to the issuing Authority.

Signed (Owner)

factors are 10.5 (Farr 40 One Design), 8.5 (the Beneteau 40.7), 9.3 (Farr 40 IOR One Tonner, Sydney 36), 8 (Northshore 38,

describing the boat as a ULDB, LDB, Racer/cruiser, Cruiser/racer.... Another description is the Hull Form box, which is divided into classifications such as fair , IOR (creased, bumps), hard chine, multi chine, clinker. The Hull Material box runs from very exotic (ie Nomex) through to concrete.

A fourth description is Accommodation. The classifications start from stripped out (say a flush-deck Adams 10) and spartan (like an IMS racer). Stripped ends, comfortable includes those old IOR racers that still have empty bows and pipecoats in the stern, but have been given some trim, a few cushions and some backrests in the saloon. Lightly furnished is something like a Sydney 36, which has light furniture but has solid bunks in the bow and stern. At the cruiser end of the range are Modern and comfortable fully fitted out (a production boat like a Swan

d IRC expert Malcolm Runnalls takes us on a trip through the d shows how to get the best from your rating

the big headsails re-measured as they get older can reduce the rating one or two points.

The third basic step is to ensure that all your large spinnakers are the same size as rated on the area of the largest spinnaker.

HULL MEASUREMENTS

Hull Factor (A): This is the rule's way of rating the hull shape, and it's one of the basic ingredients in the rating. Typical hull

Farr 1104), 7.5 (S & S 34), down to 6.4 for a cruising boat.

The Hull Factor uses all the vital measurements- overall length, waterline length, beam, draft, displacement, and an overhang factor- plus some general descriptions to get pretty much the same effect as other rules get with ten pages of figures.

For one of these general descriptions, called the Hull Type, the measurer must tick a box on the measurement certificate,

or a Beneteau) and Old and traditional heavy fit-out.

None of these descriptions actually appear on the certificate. They are loose terms, because the rating office knows that if they put down specific rules or numbers, it allows designers to design to them to beat the rule. The descriptions aren't vital, because they don't actually have much effect on the rating. They do allow the rule to give a reduced rating to boats with features that aren't ideal for racing; they allow measurers to indicate factors such as

Removing the rating bumps and hollows from an old IOR boat will not alter the age allowance but will affect the hull factor. I believe that changing the stern has about half the effect that you think it will have, because the mid girth (which drives the whole hydrostatics of the boat) remains the same.

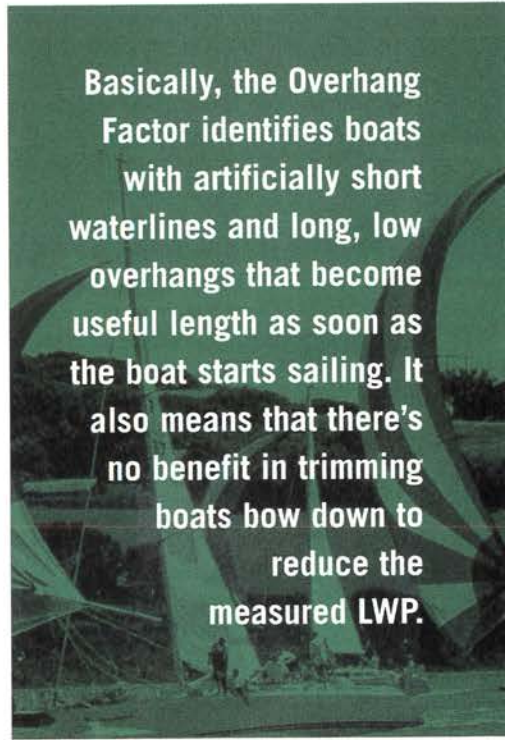
These dates are used to calculate the age allowance, which kicks in once the boat is a few years old, because we know that technology makes newer boats faster even if they have the same dimensions as

included equipment that we used to meet under IOR and IMS - 25 kg toolboxes with funny little handles that just happened to fit into funny little hooks under the windward gunwhale, tanks that were full for measurement but empty for racing.

IRC Displacement (E) : This measurement is simply a mathematical proportion to the Weight (Empty). It's intended to quantify the weight of the boat with all the safety equipment, sails and tools- all the things removed for Weight (Empty)- back on board as they will be when the boat is raced.



THE MUSTANG 30, A SLENDER RACER-CRUISER, IS A LONG WAY FROM THE IRC NORM BUT IT'S STILL BEEN VERY SUCCESSFUL IN THE HIGHLY COMPETITIVE COWES WEEK IRC FLEET. (PIC - STEPHEN MUNDAY/ALLSPORT)



Basically, the Overhang Factor identifies boats with artificially short waterlines and long, low overhangs that become useful length as soon as the boat starts sailing. It also means that there's no benefit in trimming boats bow down to reduce the measured LWP.

this boat's got a fair hull and it's light, but it's a cruiser-racer so the rating should reflect the fact that it's got a smaller cockpit and a big cabin top. The measurer will include as much extra information as possible - photos, plans, further descriptions - to allow the rating office to make the most accurate possible determination.

Series date and Age date (B) : The series date is the year in which the first boat of the class or production series was launched. The Age Date is the year in which the boat was launched, or the latest year in which modifications to the hull were made. You can alter the sailplan, the keel and the rudder without altering the age date, but any modifications to the hull lines will reduce the rating benefit.

an older boat.

LOA, LWP and Beam (C) : The Length Over All and Length Water Plane (or waterline length) are simply what they say- unlike the IMS or IOR, the IRC doesn't have a complicated method of measuring sailing length.

The Beam is simply maximum beam. Other dimensions, like the DLR, would allow the rating office to identify and deal with boats with features like huge flare and wide flare and narrow waterlines.

Weight (empty) (D) : While other systems use hull measurements ashore and afloat to work out a boat's displacement, the IRC simply weighs them (unless there's already an IMS displacement). Boats are weighed empty, to escape all of the problems with

DLR (F) : The Displacement to Length Ratio is a measure of how light the boat is, in proportion to its length. It's a standard figure in yacht design. It's generally considered that a good DLR for IRC racing is about 150-200. The Sydney 36, J/35 and Farr one tonners are right at the lighter end of this range, while a Farr 1104 is in the middle. Boats as light as the Sydney 41 and 46 (DLRs of 130) and as heavy as the S&S 34 (DLR over 300) are also competitive but a boat like the Mumm 36 (DLR 113) will struggle in many conditions.

Draft (G) : This is simply the maximum draft. Up to a sensible level, the rule's treatment of draft seems to be very fair; there's a slight penalty for deep keels and a

slight allowance for shallow boats. There doesn't seem to be any room for optimisation or exploitation of this measurement – just go to the draft where you reckon the boat will sail at its best.

O/h Factor (H) : The overhang factor is meant to reflect the usefulness of the back end of the boat. It factors in the difference between the overall length, the length water plane, and the height of the tip of the stern above the waterline and also includes a DLR calculation. Basically, the Overhang Factor identifies boats with artificially short waterlines and long, low overhangs that become useful length as soon as the boat starts sailing. It also means that there's little benefit in trimming boats bow down to reduce the measured LWP.

RIG MEASUREMENTS

Rig Factor (I) : The IRC penalises complex rigs, which are theoretically more efficient. Running backstays, jumpers, checkstays, or more than one set of spreaders will each increase the rating accordingly. Spreader are also rated according to whether they

are in-line and how heavily they are raked. The highest rig factor I've seen is 1.08.

There does seem to be a slight bias towards simple rigs. A number of designs have adopted the competitive option of a carbon mast with simple rigging, in the belief that carbon doesn't seem to attract much of a penalty (about four points) for its performance advantage.

P and E (J) : The mainsail measurements are the same as most other rules- the P is the hoist, the E is the foot measurement. There are also measurements on the mid girth and mid-upper girth, which don't appear to give any shape an advantage.

It's generally a good idea to cut down the roach of very roachy mains. There is no penalty for full battens, but if you don't have a very well tuned mast and mainsail combination that works automatically, a big roach is more of a hindrance than a help. We've cut down roaches and the boats have not only rated better, they've gone faster upwind.

J (K) : The J is the same as in IMS and other rules- the horizontal distance from

the front face of the mast to the forestay base.

FL (Forestay Length) (L) : Forestay Length is not an important element in the rule- in effect it is merely a check on the I measurement, which is the height of the forestay above the mast's intersection with the deck or sheerline. The I measurement is used in other rules, but it's hard to define and measure because it's normally half-way along the cabin. So the IRC ignores the I, using FL and LL instead.

LL (Luff Length) (M) : This is the measurement of the luff of the largest headsail. This is the important factor in the IRC's measurement of headsail height, and unlike in other rules, it's not derived from the I measurement or the foretriangle height. This allows you to get a rating reduction if your headsail luff is shorter than the forestay, although I feel that hurts your pointing and acceleration.

LP (Luff Perpendicular) (N) : This is measured in the same way as LPS in IOR, IMS and other systems – it is the shortest



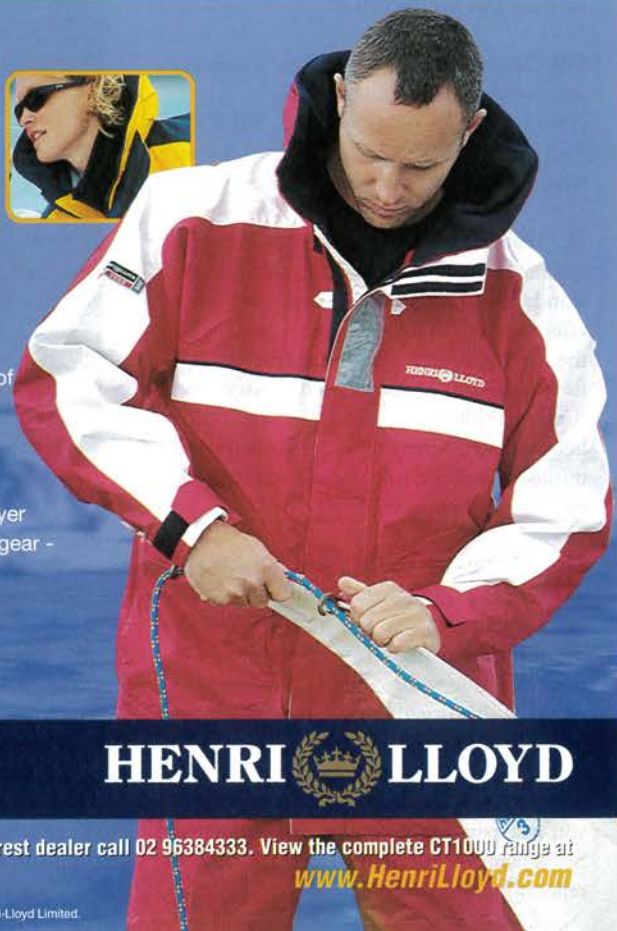
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distance from the clew of the jib to the luff. The IRC doesn't seem to favour any particular overlap, so it's just a matter of choosing the overlap that suits your boat.

SPINNAKER MEASUREMENTS

Downwind sail area seems pretty cheap under IRC, so the general rule is to go for as much as you can carry- but you must be able to carry it! The limit of size is not determined by the rule's penalties, but by

ASLU, ASLF, ASF, ASMW : These refer to the luff, leach, foot and mid-width measurements for asymmetric spinnakers. There is no longer any differentiation between asymmetric and symmetric spinnakers. However, like any sail the rating for an asymmetric spinnaker is based on potential, so if you've got a sportsboat-style asymmetric with a huge bowsprit pole, any time you can't sail to its potential you're missing out.

Incidentally, there are no restrictions on the number of upwind sails and there aren't any restrictions on their material.

Internal Ballast (Q) : This seems to have been added to stop boats being loaded up with lead under the freeboards, to increase their displacement and stability for particular series. It became quite a fashion to do this in the UK, especially among the fleet of Sydney 41s. The penalty that's now

There does seem to be a slight bias towards simple rigs. The most competitive option is a carbon mast with simple rigging, because carbon doesn't attract much of a penalty (about four points) for its performance advantage.

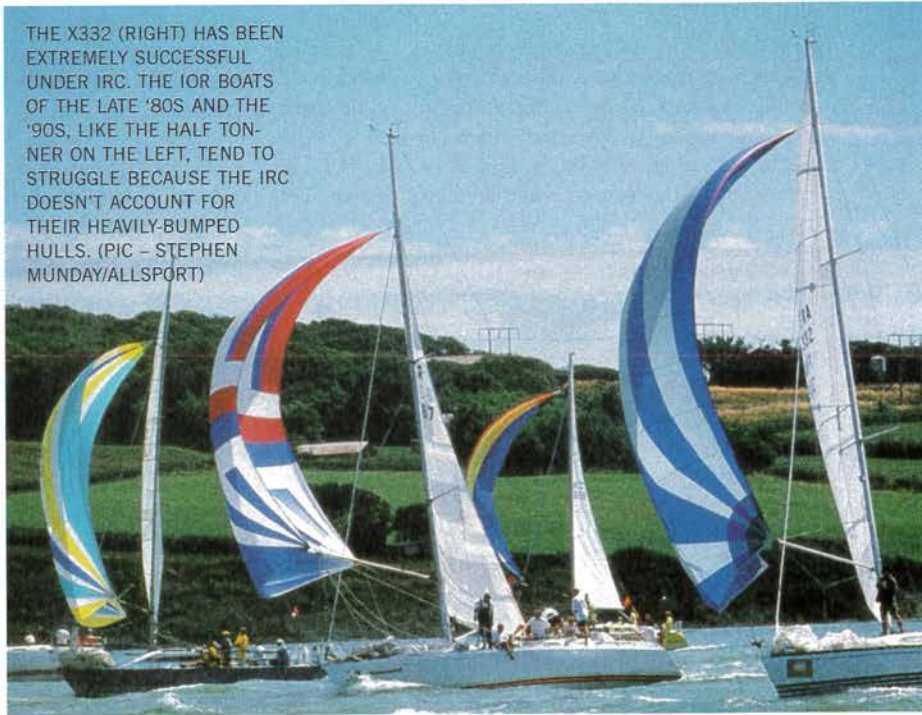
what the boat will take. If you can't carry your maximum sized kite just about every time you need a spinnaker, you're suffering a penalty and should cut the spinnaker down. Those spinnakers with luffs three metre longer than the mast only work in rare and special conditions and the rating increase just isn't worth it!

SPA (Spinnaker Area) (O) : The spinnaker area is calculated by the formula $((SLU + SLE)/2) \times ((SF + (4 \times SMW)) / 5) \times 0.83$. You should make sure all your large spinnakers have the same area.

SL (Spinnaker Luff) : Generally, the spinnaker measurements are the historic standards which still seem to work effectively. There are two SL measurements here and the average is used for the rating. Measurers quite often find that one luff is longer than the other, because of damage or manufacturing mistakes, and the rule doesn't want you to pay for area you haven't got.

SMW (Spinnaker Mid Width) : This is the width of the spinnaker at half-height. The rule's standard SMW is 1.8 times the SPL measurement, which seems to be about the most effective width anyway. The figure is actually a historical measurement from the IOR days, but IRC is not like the IOR where you got whacked over the head if you go over the measurement. Under IRC you just pay a fair rating increase for the SMW you've got if it's over 1.8, and a reduction if it's under 1.8.

THE X332 (RIGHT) HAS BEEN EXTREMELY SUCCESSFUL UNDER IRC. THE IOR BOATS OF THE LATE '80S AND THE '90S, LIKE THE HALF TONNER ON THE LEFT, TEND TO STRUGGLE BECAUSE THE IRC DOESN'T ACCOUNT FOR THEIR HEAVILY-BUMPED HULLS. (PIC - STEPHEN MUNDAY/ALLSPORT)



If you are using both asymmetric and symmetric spinnakers, it's also important to make sure that their rated areas are the same.

SPL (Spinnaker Pole Length) (P) : The spinnaker pole length is not linked to the J measurement, as it was under IOR and IMS. Instead, it is rated relative to a base length of $0.456 \times SPA \text{ square root } 0.5$.

OTHER FACTORS

The default number of downwind sails is three. Every additional downwind sail increases the rating by about .001 or .002.

added for internal ballast means that it should be removed.

Crew number (R) : This is merely advisory. Sailing committees can impose this as a maximum or they can impose a crew weight limit. Crew weight or number don't affect your IRC rating (unlike the situation in IMS) so if the sailing committee doesn't impose maximums, put as much weight on the rail as you can. Here in West Australia we have a weight limit, based on an average of 80 kg per crew member, to stop lightweight crews being outclassed by heavier sailors.

“THERE AREN'T ANY SILLY LOOPHOLES IN THE RULE ANYMORE”

If you're after a view of optimising under IRC, it's hard to go past English designer/boatbuilder John Corby. Corby was the “angry young designer” of the IRC rule- the man who is largely credited with finding the holes in the early days of the rule and using them to tear up the huge, highly-competitive UK fleets.

Corby's rule-beaters were heavy boats with huge keels and long overhangs, powered by massive masthead rigs. The heavy displacement and short waterline ensured that they rated low, while the high ballast ratio, big rigs and clean lines ensured they went fast.

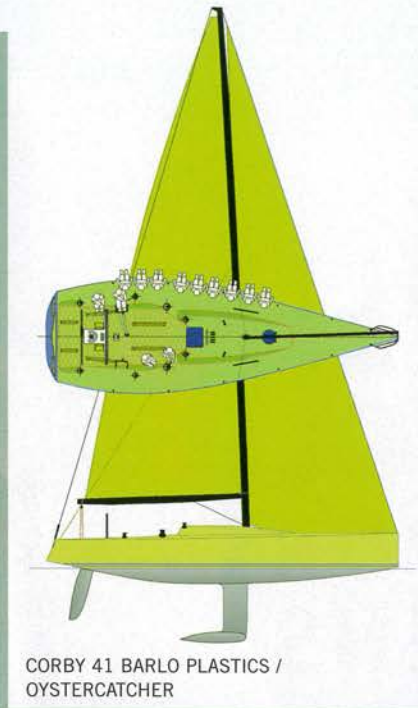
“I definitely used to exploit CHS's favouritism for weight, with heavyish boats like Mustang Sally and Independent Bear which were much faster through the water than expected, particularly upwind” says Corby. “However Independent Bear (8tons,41') was the last straw for the RORC and they reacted by dreaming up IRM and updating CHS into IRC.”

“In its latest guise IRC now encourages fast nicely proportioned all-rounders such as my 41 Barlo/Oystercatcher which beats a Farr 40 around the course 9 times out of 10, and rates slightly less as well. I'm not making boats that are just purely rule boats any more; they're now essentially nice boats with a few little tweaks to the rule. If you built a boat without the tweaks, it wouldn't be any faster.”

Corby's designs are still unusual boats. Even his latest successes have masthead rigs and a full stern with a lot of rocker aft. They are still heavy - Barlo Plastics, at 6,300 kg, weighs just 200kg less than a Sydney 41.

“We made a boat that had a heavier keel than the Farr 40 to give an edge upwind, but not heavy enough to slow it downwind, and that rated three or four points less” he says.

“I started with masthead rigs when the boats were very heavy and needed huge genoas and spinnakers to get them going” he says. “With the later boats like Barlo Plastics we wanted a short overlap headsail so I kept the masthead rig to keep the jib as big as possible- it's not a rating thing. I also happen to specify very strong and simple rigs which club sailors find easy to sail with.”



CORBY 41 BARLO PLASTICS / OYSTERCATCHER

“They're terribly quick in light airs, with no weak points.” Corby says of his designs. “The ‘most average’ point of sail is in 13 knots of wind, when they're only slightly faster.”

Corby agrees that modifications to the IRC mean that even his custom raceboats have no in-built advantage. “The custom-built IRC boat doesn't have an advantage now. You can either go and buy a fast production boat, like an IMX 40 or Beneteau 40.7, or a fast custom raceboat. At Cowes Week my boats got first and fourth, with an IMX 40 in second and a Beneteau 47.7 in third.”

So what sort of older boats are competitive in top-level IRC racing? Good old boats like Sunstone and the 1972 vintage Swan 48 Jacobite (a classic heavy mastheader) are very successful.

“Age allowance isn't enough on its own” says Corby. “You have to have a boat that was very very good when it was new.”

Lightweights like the Mumm 30 aren't competitive in the UK unless they get special conditions, says Corby. The old IOR boats are also generally off the pace against newer boats, he says, although he concedes that some half tonners have been successful. Like Runnalls, he cautions against trying to “de-bump” IOR hulls; “Fairing the stern on a 1 tonner meant the rating went up disproportionately, so people look for boats with the bumps in nowadays.” The old IOR boats in the UK are generally quite different to the Australian older boats, so the same factors may not apply here.

So what can an owner do to optimise for IRC? “There's nothing particularly you can do to optimise now” says Corby. “Those days are over because there aren't any silly loopholes in the rule anymore. Just make the boat fast without carrying penalties-make sure you're not carrying a light genoa that's bigger than your medium genoa, things like that. Speed is now the key, rather than rating really low.” ♦

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BULLS charge AT PORT STEPHENS

The Bull 9000s dominated the Super 30 National Titles at Port Stephens while the Mumm 30s contested their first-ever National Championship. Report from the cockpit of Young Lion by Chris Thompson.



LEFT - WILD BULL FOUGHT OFF A STRONG CHALLENGE FROM THE OTHER BULL 9000, SANCTUARY TWO, TO WIN THE SUPER 30 NATIONALS. (PIC - IVAN SKELLETT)

THE PORT STEPHENS JOG CHAMPIONSHIP, AKA REGATTA 2001, WAS CONTESTED IN three classes. The Super 30s and the Mumms raced for their national titles, while the JOGs raced for their state championship.

The weather was kind, the surroundings spectacular, and the racing close and spirited. The fleet included competitive boats from four states, Lake Macquarie, Botany Bay, Port Hacking and Sydney and the mix of events made a welcome change in these days of eternal windward-leewards. The series included the 80 n.m. overnight Pittwater to Port Stephens race; two offshore triangles; a day race around the spectacular islands off the Port; and a concluding day of three windward/leeward sprints inside Port Stephens. With the Mumms causing a stir and new production and custom JOG

a former 470 Olympic rep and Fireball dinghy world champion. "We had a very, very good crew who knew the boat and that's the biggest secret to all boats" said Tillet. The team included Simon Bath (former JOG champion with Gingerbread Man), Richard Lumb (Tillet's crew in the '84 Olympics), Col Gordon (Ausmaid), Darryl Rugari, Luke Burrows, Victoria Shanks and (on the last day) 470 and skiff "heavy" Steve Quigley.

The Adelaide crew benefited from their experience with the Mumm to sail to a convincing winning margin. Like almost all those who win with runnerless rigs they adjusted their rig to the wind conditions, but they had a simple approach, altering only the forestay and leaving the shrouds alone.

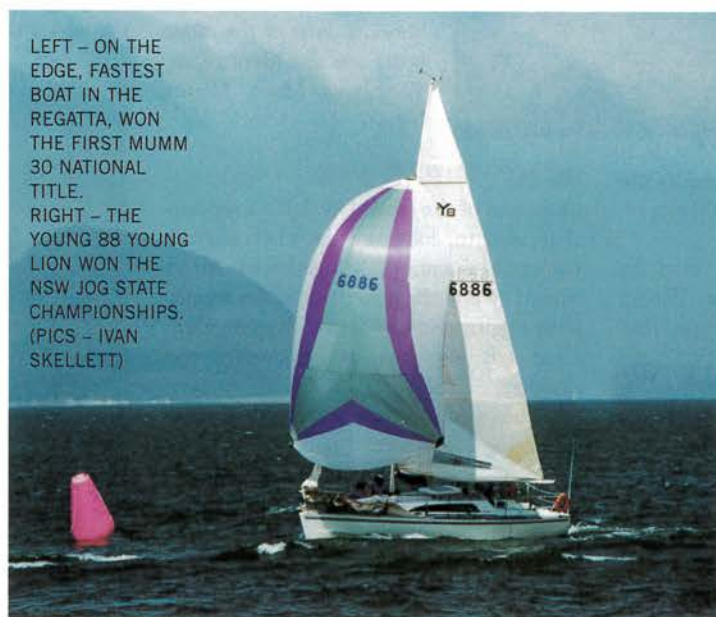
Was it worth buying a trailer and then hauling the boat all the way from

International picked up his own new boat just before the series and scored two wins on his way to fourth place.

The Mumm owners and crew were enthusiastic about the series and their boats. Their performance and tight racing impressed all those who watched and by the end of the regatta, there were several potential Mumm 30 owners and charterers looking for boats. It looks as though the class' re-launch will succeed.

SUPER 30 NATIONALS (12 BOATS)

Rod Skellett's Bull 9000 Wild Bull was the winner of the Super 30 nationals. She led on points all the way to win by five points from the other Bull, Peter Taylor's Sanctuary Two. The Bulls and the Mumms fought out line honours in an interesting clash of designs. The Bulls (designed by Greg Young and built by Mal Hart) are



LEFT - ON THE EDGE, FASTEST BOAT IN THE REGATTA, WON THE FIRST MUMM 30 NATIONAL TITLE.
RIGHT - THE YOUNG 88 YOUNG LION WON THE NSW JOG STATE CHAMPIONSHIPS. (PICS - IVAN SKELLETT)

"We had a very, very good crew who knew the boat and that's the biggest secret to all boats" said Tillet.

boats hitting the water, it seems that the mini offshore boats may be set for a resurgence.

MUMM 30 NATIONALS (5 BOATS)

Only four Mumm 30s raced in full one-design trim, but although the numbers were small, the geographic spread and the talent were worthy of a national title. The owners and charterers came from Victoria, South Australia, Queensland and New South Wales.

The winning boat, On The Edge (SA), was owned and skippered by Chris Tillet,

Adelaide? "Absolutely" said Chris Tillet. "We thoroughly enjoyed being part of it."

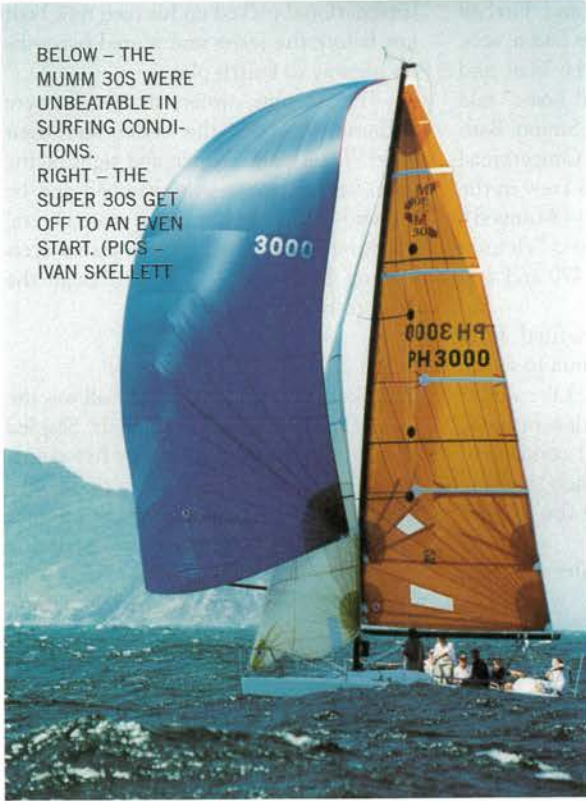
Second was former National JOG champion Mal Jones in Mumm's The Word. She was steered by David Mackay and was slightly out of class trim but was welcomed to make up the numbers.

In third was Stewart Lewis' Enigma, fresh from builder DK Marine. Lewis, from RQYS Brisbane, is such an enthusiast for the class that he now owns two boats. His "old" boat, Addiction, was chartered to JOG stalwart Peter MacNamara. Kyle Tyrrell from Farr

very powerful offshore-style boats, some three-quarters of a ton heavier than the Mumms and carrying much bigger bulbs, more crew weight and much bigger genoas and spinnakers.

Upwind in a breeze Wild Bull (which carries so much runner tension that she's collapsed three runner winch drums!) was higher and faster than the Mumms, says Skellett. Downwind under new Doyle Fraser kites she was competitive, even if she couldn't surf as quickly as the Mumms. She also rated lower than the Mumms, giving her a performance edge that allowed

BELOW – THE MUMM 30S WERE UNBEATABLE IN SURFING CONDITIONS. RIGHT – THE SUPER 30S GET OFF TO AN EVEN START. (PICS – IVAN SKELLETT)



On The Edge by a single point on corrected time.

The Mumms were fast downwind, quicker than the Bulls in surfing conditions, and were generally faster around the track than the Bulls. On The Edge was the fastest boat of the series, taking the gun three times. The JOG rule is perhaps the last measurement system in the world that gives no rating reduction to the short-footed headsails that the Mumms carry, so they rate high and weren't quite competitive with the Bulls on corrected time.

The Mumms and Bulls dominated on corrected time as well as line honours. First of the older boats was the Mount Gay 30 Shaya Moya (Peter Ingle).

with a win in the long race after a great start and never lost the lead thereafter. Her only place out of the top two came in the last race, where the leading boats in the JOG fleet all became confused during a course change.

Second overall was Anthony Patterson's Tow Truck (formerly State of the The Ark). The pretty little 8.5m centreboarder was designed and built by her first owner as a JOGgie but she has much more accommodation and less rule distortion than the normal JOG specials. Patterson has given the boat a bigger rig and a longer stern that ended up giving her a much higher rating and although her Lake Macquarie crew (headed by 16 foot skiff national champ John Boyd) took her around the track slightly faster around the course than Young Lion she couldn't save her time often enough.

A distant third overall (top Division 1 boat) was John Engisch's Cape 31 Torch, the fastest boat in the division. ❖

Rod Skellet to "go for safe starts and let the boat do the rest, knowing we could rely on it to get us through."

Wild Bull took an early lead by consulting weather specialist Roger "Clouds" Badham, who told them that there was no southerly set. Wild Bull hung well out to sea in the overnighter, holding the breeze while others hit softer airs inshore. Wild Bull took the line and handicap double in the no-discard passage race.

Wild Bull was sailed by a crew who have been together for three years. Skellet was joined by Peter Hooney, John Skeeter, Jenny Kings, Young Australia veteran Nick Bice, Dave Lowe, James Ogilvy and tactician Chris Pritchard.

Sanctuary Two had an impressive crew, lead by skiff sailors David Witt and Emmett Lazich, but they were short on time in the boat. She had two wins but a sixth place to Wild Bull's win in the shifty Race 6 cost dearly.

In third place, a single point back, was Mal Jones' Mumm 30 Mumm's the Word. She rated lower than the standard Mumms so she pipped

JOG STATE TITLES (10 BOATS)

Only one of the small Div 1 JOG specials that used to dominate the class (former national champion Gingerbread Man) turned up and she pulled out of the regatta with rigging damage during the first race. That left two boats to dominate the division.

The overall victory went to the Young 88 Young Lion, owned and skippered by Zach Stollznov with Darren Stollznov as sailing master. Apart from her rudder she's a standard Young 88, but unlike most of her sisters she carries no penalty kites and therefore rates well. Young Lion started



Super 30 Nationals

1	Wild Bull	Rod Skellet	Bull 9000	.8330	1,4,2,2,1,2,8	12 pts
2	Sanctuary Two	Peter Taylor	Bull 9000	.8343	4,2,3,1,6,1,7	17 pts
3	Mumm's The Word	Mal Jones	Mumm 30	.8426	6,6,1,4,2,3,2	18 pts
4	On The Edge	Chris Tillett	Mumm 30	.8553	3,1,4,3,8,7,1	19 pts

Mumm 30 Nationals

1	On The Edge	Chris Tillett
2	Mumm's The Word	Mal Jones
3	Enigma	Stewart Lewis

Junior Offshore Group States

1	Young Lion	Zachary Stollznov	Young 88	.7234	1,2,2,1,1,2,3	9 pts
2	Tow Truck	Anthony Patterson	One-off 8.5	.7385	5,1,1,2,2,3,2	13 pts
3	Torch	John Engisch	Cape 31	.8057	2,5,4,8,4,1,7	23 pts

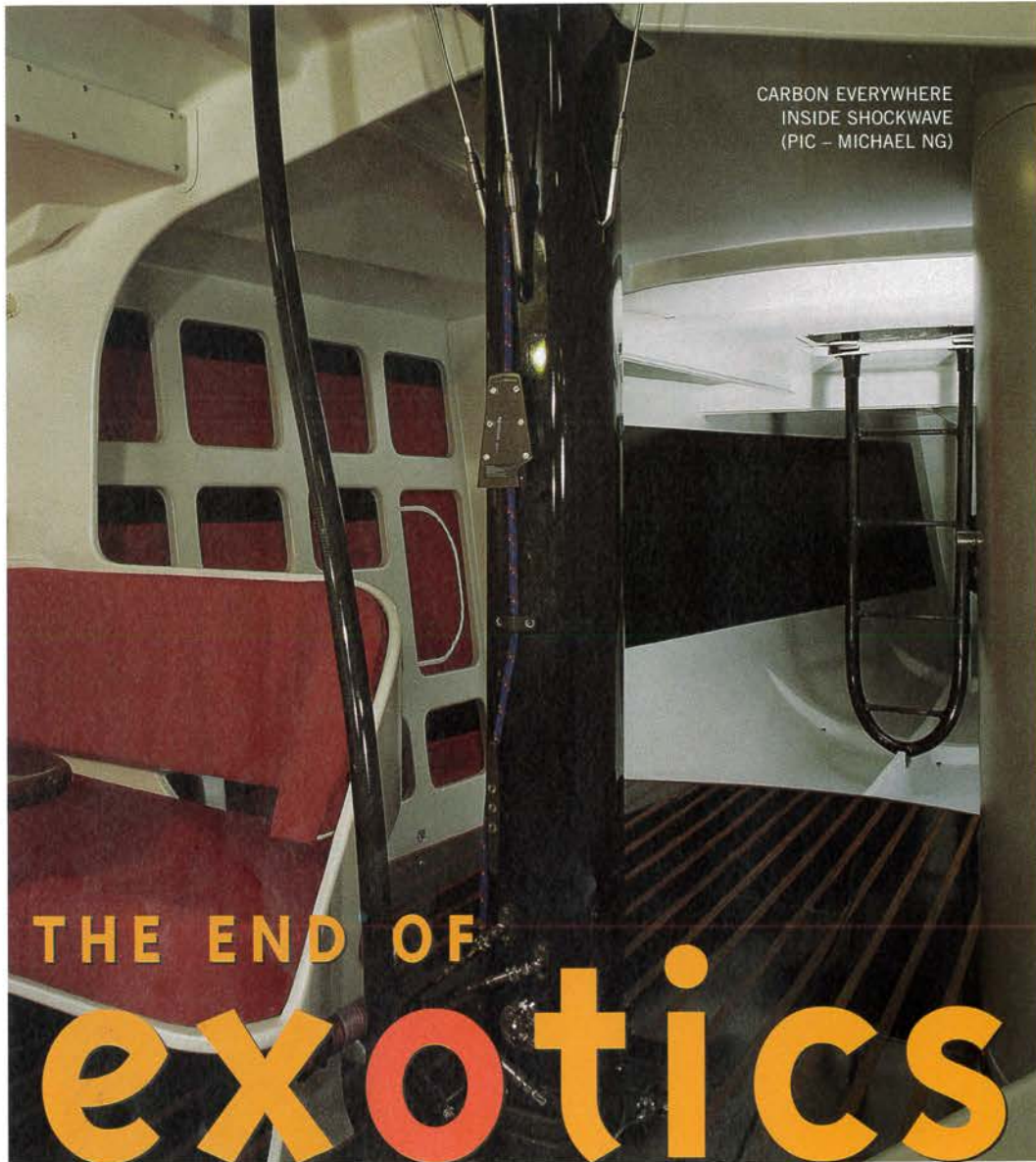


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CARBON EVERYWHERE
INSIDE SHOCKWAVE
(PIC – MICHAEL NG)

Once they were called “high tech exotics”, but now carbon fibre, aramids, honeycomb cores and the other components of modern laminate systems are just the modern boatbuilder’s stock in trade. Offshore looks at what’s happening in the world of laminate construction.

THE END OF exotics

“THERE’S BEEN NOTHING NEW FOR 25 YEARS” SAYS JOHN OAKLEY OF MATERIAL supplier Advanced Composites when you ask him about what’s happening in laminates. “The biggest change has been in the general acceptance of what used to be called exotics”.

“What was formerly an exotic is no longer an exotic” says Simon Grosser of leading materials engineers SP Systems. “With better knowledge of the materials and more volume, the cost is coming down to the point where it’s competitive to build in carbon, epoxy and aramid. In some applications you can use so much less material and labour that it’s cheaper to use carbon than glass.”

The increasing use of laminates makes

even more sense when it’s seen against the rising loads imposed by modern boats. As the rash of failures in the first crop of Whitbread 60s showed, modern boats impose great strains on their hulls. “The new high righting moment flat boats (like IRC racers) will slam a lot and have very high loads” says Peter Ullrich of top Grand Prix builders Boatspeed. “They are going to test the limits of the materials.”

One ever-present problem for boatbuilders is that the yacht building is a cottage-sized industry testing the limits of aerospace-type materials. As John McConaghy, one of the world’s pioneers in laminates, points out “the problem for boatbuilders is that we are following the aeronautical industry in materials and

techniques, but unlike them we’re only building one-offs and they have to work. Owners don’t allow us to build a few prototypes to test, like the aero industry does!”

PRE-PREG OR WET PREG?

One of the interesting things about the high-tech boatbuilders in Australia and New Zealand is that three of the biggest—Cooksons, McConaghys, and Boatspeed—feature three different philosophies about one of the most important pieces of technology—the lay-up system.

Lay-up systems are vital, because they control one of the most important factors in a lamination—the “fibre volume”. The fibre volume is the percentage (by weight)

of the fibres in the laminate, compared to the percentage of resins.

The ideal fibre volume is when the flexibility (or the Young's modulus—generally just known as the modulus) of the resin, exactly matches the modulus of the fibres. This allows the fibres and the resin to stretch together when they come under load, supporting each other. If the resin in a laminate is more brittle than the fibres, the load isn't transferred to the fibres until the point where the resin is failing. The same occurs if too much resin is applied.

At the other extreme, above about 60-70% fibre volume (depending on the way in which the fibres are packed together) the laminate may be stiffer but the strength will decrease due to the lack of sufficient resin to hold the fibres together properly.

Fibre volumes generally vary from about 33% (for low-tech production powerboats built from "wet lay-up" of chopped strand mat) to 50% (most production yachts, hand-laid in woven cloths) to E glass, S glass and carbon all at about 65-68%. Aramid fibres like Kevlar can't absorb resin so they have a low fibre volume—a maximum of 58%.

The old "wet lay-up" method (as used in most production powerboats and many yachts) consists of laying the fibreglass cloth or chopped strand mat in the mould. The resin is then applied or "wetted out" by hand or by gun. The problem with wet lay-up is that it's impossible to control or quantify, with accuracy, the fibre volume. For this reason, wet lay-up isn't commonly used in high-tech laminates.

PRE-PREG

Pre-preg (or more correctly, pre-impregnation) is the mechanical application of precisely measured quantities of resin to the cloth under precise conditions of heat and pressure. Instead of swamping the cloth with resin to ensure that the fibres are saturated, the pre-preg process forces the resin into the fibre under pressure. As a result, it requires much less resin and allows a much more precise control of fibre volume.

There are no pre-preg machines in Australia, so pre-impregnated sheets are shipped out from Europe in refrigerated containers that prevent the epoxy from setting or going off. After the sheets are applied to the structure, they are "cooked" to set the resins. To many boatbuilders, like McConaghys, the precision of pre-preg, and the very high cure temperature of the resin, makes it the ideal form of construction.

WET-PREG

A third technique is "wet prepping", as practised by Boatspeed and Cooksons. Like pre-prepping, "wet prepping" is carried out by a machine that allows precisely quantified amounts of resin to be applied to the cloth. Unlike pre-prepping, the machinery in use at Boatspeed doesn't apply high temperatures or high pressures, but it allows Boatspeed to vary the fibre volume for each different layer in the laminate. Alongside the core, they may use as little as 48% fibre volume, so that there's plenty of resin to form a strong bond with

the core. In the centre of the laminate, the fibre volume of the layers may reach as high as 70%, while the external layers will again be more resin-rich, to allow the epoxy to be "drawn off" to cover the weave of the cloth. "The benefits are awesome" says Peter Ullrich. Renowned New Zealand boatbuilder Mick Cookson uses a similar process.

THE WAY FORWARD.....

"There's no quantum leap" says John McConaghy when asked about advances in boatbuilding. "As the years go by, we're just doing little tricks."

One of the "little tricks" is the increasing use of honeycomb cores, which have dropped in price significantly over the last few years. The advantages of honeycombs, says McConaghy, include excellent compressive strength and the fact that the surface does not absorb resin.

McConaghys is convinced that pre-preg is "the ultimate way to build a top end racing boat". "It's laminated in a very controlled environment, the quality control is a hell of a lot better, and the resins are much tougher. Pre-preg is also cured at a higher temperature, so the heat-distortion level is higher."

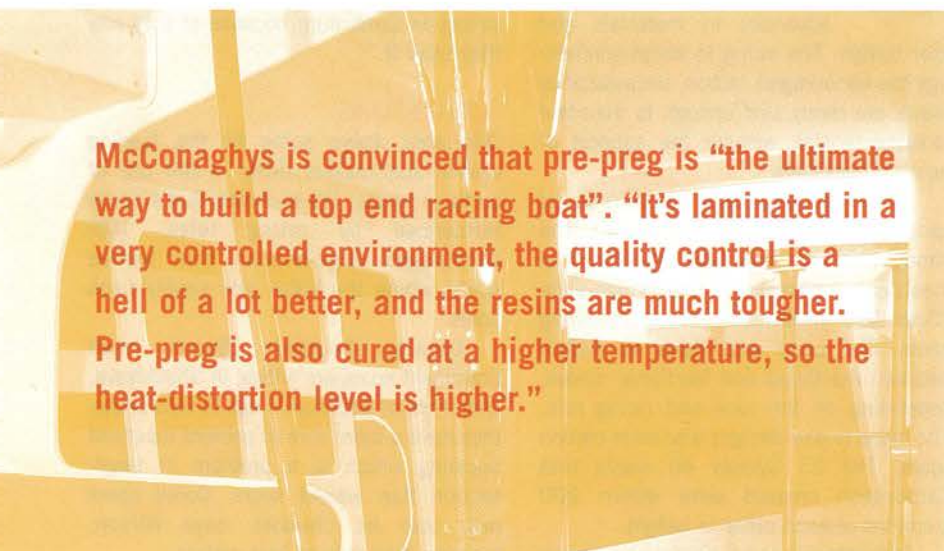
An example of current technology, says John McConaghy, are this year's crop of 18 foot skiffs. Rule changes allowed them to be built out of Nomex honeycomb and pre-preg. "They are now lasting twice as long and not gaining any weight".

McConaghy sees some movement towards ever-higher modulus carbon fibre but he cautions that the gains are very small and rarely worth the big cost increase.

John Morris, a project manager at McConaghy's, says that some advances are coming in the "bladder moulding" of components like steering pedestals and wheels. In bladder moulding, an air bag is inserted inside a female mould. Compressed air can be blown into the bladder, forcing the laminate against the mould at five or six atmospheres—several times the force of one atmosphere that's the maximum of vacuum bagging.

DUFLEX

"Our biggest development at the moment is "DuFlex" says Lorraine Duckworth of WEST epoxy supplier ATL Composites. Du Flex, she says, are cored panels consisting of layers of epoxy and fibreglass



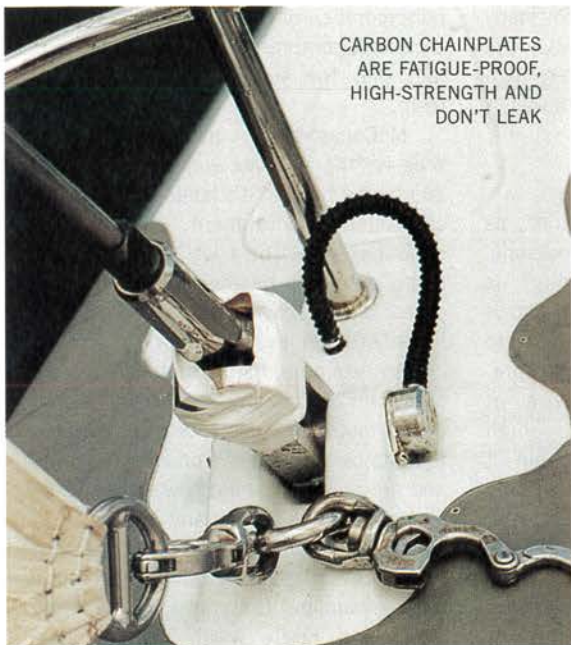
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sandwiching end-grain balsa or foam cores.

The advantage of DuFlex panels, says Duckworth, is that they are formed under heat and pressure. Just as in pre-preg, the forming process allows a high (about 65%) and consistent fibre volume, so the panels are uniform in their light weight and high strength. The lay-up and core can be tailored to the builder's specifications. DuFlex can also be cut out with a precision CNC router, allowing it to be supplied in pre-cut kit form as well as standard panels. The material has been called a modern version of plywood, because it lends itself to cheap and quick construction of flat areas such as hard-chine hulls.



CARBON BOATS ARE EXTREMELY STIFF AND SHOULD LAST WELL, BUT THEIR ABILITY TO WITHSTAND HIGH-SPEED IMPACTS HASN'T SIGNIFICANTLY IMPROVED SINCE THIS (OR 50 LOST ITS BOW. (PIC - GILLES MARTIN-RAGET/ALLSPORT).



CARBON CHAINPLATES ARE FATIGUE-PROOF, HIGH-STRENGTH AND DON'T LEAK

CARBON SPARS

One area that is still developing fairly quickly is carbon spars. "There's a lot happening" says Ian Holley of Nowra-based firm Carbontech International which has been making carbon spars since the inception of the IACC class. "The general acceptance of carbon spars is well documented. In the last Hobart, the first 12 or 15 boats had carbon masts, and no-one had any problems."

"Alloy masts will eventually go the way of timber spars" agrees Simon Grosser of SP Systems. "Even for cruising yachts they offer less weight aloft so you can have less draft, it's actually the superyachts, not the smaller boats, that are leading the field."

spar design. The swing to swept-spreader rigs has encouraged carbon, because alloy masts are rarely stiff enough to maintain forestay tension without the support of running backstays.

Ian Holley notes that the stiffness of carbon masts makes them versatile. The strong topmasts can take the strain of masthead spinnakers and Volvo-style "Code Zero" masthead headsails, allowing boats like Loco and Xena to switch between masthead and fractional modes, depending on the race and rating rule. The move to one-designs also suits carbon spars. The 25 Sydney 40 masts that Carbontech created were within 300 grammes of each other in weight.

Carbontech's spars are formed as one

piece inside very heavy metal moulds, using only pre-preg carbon. "The beauty of it is that we're using aerospace technology and very good backup" says Holley. "Every time we do a mast for the Volvo syndicates, we make up another section that is sent up to Europe for testing and Finite Element Analysis. They're telling us that we're attaining the limits of the material specifications, which is a big advance from the days when boatbuilders would take a material as strong as steel and it would end up as strong as aluminium because of the way they used it."

CORE QUESTIONS

One area where some of the leading carbon spar-makers differ is the use of cores in masts. It's a choice that's partly influenced by rating rules. IMS encourages large-section thin walled spars, where the Volvo rule simply bans cores.

Locally, Southern Spar's most prominent spars are sitting in Shockwave. Like most of Southern's rigs in IMS boats, they have a foam core to prevent localised buckling which is a problem in large-section thin walled spars. Cored spars may also be cheaper, says Wilson, because they require less carbon.

“The general acceptance of carbon masts is well documented. In the last Hobart, the first 12 or 15 boats had carbon masts, and no-one had any problems.”

In contrast, Carbontech don't use cores. “The only reason to use cores is if the side walls are going to buckle under loads like a pressure pushing through the axis. Our loads gets transferred by compression tubes that takes the load from one wall to another” says Ian Holley.

One area where both agree that cores are useful is in booms. Modern booms are deep, for added area, so again the walls must be kept thin if they are to remain light. Booms are also under greater bending loads than compression loads, and buckling is even more of an issue than it is in masts.

FILAMENT WINDING

One technique that may make the move from small boats to offshore boats is filament winding for spars. Filament winding (where individual filaments-“threads”) of carbon are wound around a male mould (or mandrel) can be a cheaper method because the filaments are cheaper raw materials, not prepared fabrics.

Filament winding does have its drawbacks- it's difficult to keep an even tension unless the section is round and the finished appearance is not as elegant as female mouldings. It's also said to be hard to laminate the “zero degree fibres” - those that run straight down the mast, directly along the main compression loads.

Clive Watts of Composite Spars in Sydney's Taren Point is an experienced filament winder who is moving from making skiff and dinghy spars and spinnaker poles into yacht sections. Watts only makes round sections, but as he points out they are very well accepted in the highly competitive and progressive world of small boats, so any theoretical windage problems seem to be balanced out by weight and cost advantages. Watts has the mast for a 13m offshore boat under way. It's being built for a leading overseas skiff, Olympic and America's

Cup sailor, who seems to be convinced of the qualities of filament winding.

THE BOTTOM LINE

Although carbon costs are coming down, black spars are still expensive- about four times the price of an alloy section. Simon Grosser doesn't believe that carbon spars will ever be as cheap as alloy, because laminating will always take more labour than extruding. “It's more of a process issue than a materials issue” he says.

Some spar-makers say that a bare carbon tube can be fitted out in the same way as an alloy section, but Ian Holley doesn't agree. “It's a quantum leap between fitting out an alloy mast and fitting out a carbon mast. We started out just making tubes for spar-makers, but we found we had to take on the fitting-out as well to ensure it was done properly.”

Carbon doesn't corrode but it's an enthusiastic conductor of electricity, so carbon masts must have stainless or well insulated alloy fittings like alloy spars. Carbontech use fittings made from hard-coated alloy or very high grade “Duplex” stainless steel. They use carbon, stainless or alloy fittings depending on the application whereas Southern Spars believe that metal fittings are the most effective solutions.

Spinnaker poles, the first spars where carbon made a widespread appearance, have also changed. Southern Spars formerly laminated its poles in two male moulds and joined them together. Now they are using one piece “bladder moulded” construction. The carbon is laid up in a female mould and a bladder inside the carbon is then inflated, forcing the laminate up against the walls of the mould. It's sort of like vacuum-bagging in reverse. Southern Spars don't use cores in spinnaker poles, because there isn't the same pressure to use large sections and their cylindrical shape is ideal to prevent buckling under the compression loads that are imposed.

And what of the future? “The big leap is going to be in composite standing rigging” says Wilson. “I imagine its mainstream use is probably about five years away. There's a considerable amount of work to do in issues like termination techniques.”

cont'd p32



THE REICHEL/PUGH MAXI CHANCE UNDER CONSTRUCTION AT MCCONAGHY'S.

TOP, THE BROWN NOMEX CORE IS LAID DOWN ON THE DECK MOULD.



CENTRE, THE HULL MOULD WITH NOMEX LAID DOWN AND EPOXYED IN PLACE.



BOTTOM, THE HULL MOULD IS COVERED WITH PRE-PREG CARBON FIBRE BEFORE THE VACUUM BAGS ARE APPLIED TO SQUEEZE THE LAMINATE DOWN. (PICS - JOHN MORRIS)

LAMINATES- HOW WILL THEY LAST?

EVERY ADVANCE IN YACHT CONSTRUCTION IS GREETED WITH THE same chorus. "They're throwaway boats, dinghies with lids- they'll never last" croak the shellbacks who sail the yacht club bars.

The problem for the knockers is that even the pioneering laminate boats, the ones that date from the days when epoxy, carbon and Kevlar were labelled "exotics", haven't shown much tendency to fall apart. In fact, there are plenty of builders and designers who are prepared to predict almost unlimited lifespans for epoxy laminate boats.

"Composite boats do seem to have a better life expectancy than wooden ones" says Steve Morris from Farr Yacht Design. "But it is an interesting conjecture amongst sailors that even composite boats grow "soft" over a period of a couple of years. To date I don't believe we have seen any hard evidence this is true."

"With composite boats, after the first 12 to 18 months to sort out the bugs, they've pretty much settled down unless they are radically over-stressed" says Peter Ullrich. "I'm yet to see a reason for a composite boat to fail." Despite this, Ullrich isn't totally sanguine about the life-span of laminate boats. The rigid nature of carbon boats, he says, means that they are a comparatively brittle structure, with all that implies for shock loadings. "I always feel that there's a question mark over a carbon boat" says Peter Ullrich, "Every time it goes out there it's trying to beat itself apart."

In the early days of IMS there were restrictions on the use of carbon that created a generation of aramid Grand Prix racers. Aramids are superb for impact resistance because of their high tensile strength, which is why they are often still used as reinforcement in carbon boats. In terms of stiffness, however, aramids are little better than quality glass fibres. And unlike the other fabrics, aramids don't actually absorb any resin into the fibres themselves - instead they form little tunnels of aramid, surrounded by resin.

Because of the lower modulus of aramids, Kevlar boats are inherently more flexible than carbon ones. Some designers and engineers say that they will suffer from "matrix degradation"- the fibres start to move in their tunnels in the resin and therefore fail to give the resin the support they are meant to. It's a factor that has led some to doubt the life span of aramid boats. "They are getting stretchier as they get old; Kevlar by itself is not as good as Kevlar mixed with carbon fibre" said one boatbuilder.

Other experts, like Peter Ullrich, disagree. Good aramid boats are designed with flex in mind, says this

Because of the lower modulus of aramids, Kevlar boats are inherently more flexible than carbon ones.

school of thought, and therefore they can take the stretching and bending. They say that there's no reason to believe that the PVC foam cores have a limit on the amount of times they can cycle under load and off load, and therefore there's no reason to think that Kevlar boats have a limited lifespan.

Ullrich also stresses that you can't compare the longevity of more recent boats with that of some of the early foam sandwich boats of the late '70s and early '80s. The older boats were often constructed with thick lay-ups (about 5 mm thick) of brittle polyester resins, which sometimes adhered poorly to the core. Cores were constructed from flexible foam and were as thin as 10 mm. Because the skins were so close to the centre of the laminate (which is the axis of the bend) when a panel was distorted under pressure, the lay-ups which were designed to be in compression could be placed in tension- and vice versa. It's a combination that can lead to the skins detaching from the core- "it's "tear along the dotted line construction" said one noted builder.

As Ullrich notes, boats built since the mid '80s have different panel engineering. Core widths are up to

about 40mm, so the skins are far enough away from the axis of bend that the outside skin is always in tension and the inside skin is always in compression, even when the panel is flexing. The thinner skins (ranging from 2.2 mm to 1.3 mm, even in 50 footers) have the same stretch characteristics as the modern stiffer cores and epoxy resins have better adhesion to the foam core, so there's less chance of delamination.

"Delamination is a word that's used a lot, but it's an extremely rare occurrence" says Peter Ullrich. "It actually means an inter-laminate failure between the skins. Foam boats

tend not to do that. Instead, they get core sheer, where the foam is crushed but remains bonded to the laminate. It tends to occur at the edges of bulkheads and at the turn of bilges. If there is a lot of movement, the foam will grind against itself. It can get very noisy, but it doesn't mean the skins are about to crack and the boat's about to sink."

Carbon masts, which fell like autumn leaves in the early stages of development, are now becoming reliable. "Carbon theoretically has perfect memory, unlike alloy, so carbon masts should never get soft like alloy masts, and they don't corrode" says Ian Holley. "Ultra-violet doesn't seem to be a problem- I've seen America's Cup masts that have been laying around for 12 years and they don't seem to have any flaws.

Overall, it seems that there's a pretty bright future for the ageing fleet of composite boats. As John McConaghy, one of the first in the world to build Nomex and carbon boats, says, "the carbon boats, if built properly, will last. I don't think that there is a lifespan that we know of yet - the new breed will be around for a long time." ♦

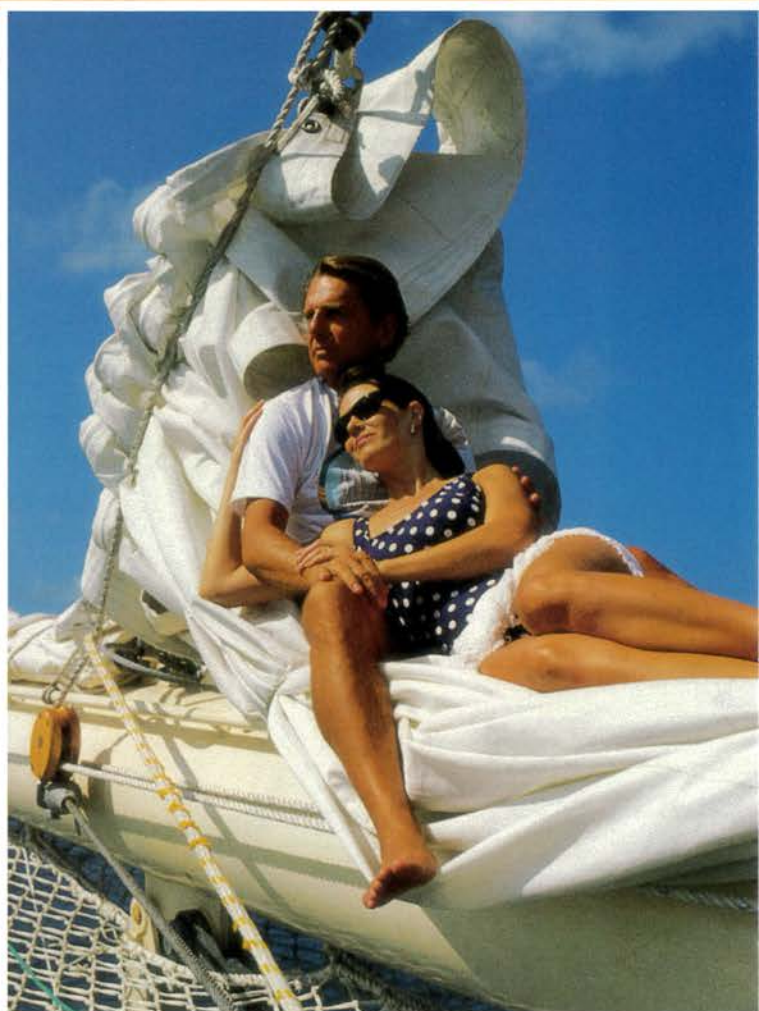


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softco yacht

Racing doesn't have to be about blood and guts. Charter holiday specialist Trevor Joyce looks at the surge in fun racing, including a new concept in fun regattas at Hamilton Island.

ore racing

OFFSHORE YACHT RACES ARE HISTORICALLY MALE DOMINATED FOR SOMEWHAT OBSCURE REASONS GIVEN THAT WOMEN ARE NEITHER less numerous nor less competitive than men on sporting fields in general. Just take a look at the composition of the Australian team at the recent Olympic Games and you'll quickly realize that in fact women are on the way to outnumbering men at the elite end of the wide world of sport.

The reasons for their relative absence from the high seas may have something to do with the fact that most offshore yacht races deprive competitors of all of the most basic creature comforts; a dry, warm and quiet place to sleep, a stationery kitchen and bathroom and at least a couple of square meals a day. Men clearly have a need to test their endurance in the absence of these comforts while women it seems prefer more pleasurable fields of sporting endeavour to placate their egos. Eliminate the discomfort, however, and turn up the "fun dial" on the racing and maybe the situation would be different.

This theory gained some credence in June 2000 when the inaugural Tahiti Cup was sailed in the Leeward Islands of French Polynesia. Billed as the only sailing regatta in the world with more lay days than races the event attracted 60 women in a total of 165 participants; a statistic, I suggest, that has not been previously equalled at any sailing regatta

Participant Wendy Pember of Adelaide summed it up with her view that, "Tahiti had a sense of romance to it and although the intensity and excitement of the races was the same as always, the lay days created the opportunity for relaxation and mutual appreciation". Wendy's partner Grant Pember put it quite succinctly though, "If Wendy had not gone to Tahiti I probably would not have gone either so we both ended up winning."

The Tahiti experience has created a blueprint for use in other exotic sailing locations around the world with the Greek Island Odyssey over two weeks scheduled for September 2001. The racing will be conducted by the Hellenic Offshore Racing Club and some serious Australian racing yachtsmen will take part, but the alternate lay day/race day concept has again produced an almost 50:50 mix of men and women among the 20 participating race crews.

In March 2002 the Andaman Sea in Thailand will provide the backdrop for the inaugural Thai Cup to be sailed among the truly spectacular islands of the Gulf of Phang Na adjacent to Phuket.

This year in the last week of October a similar event, to be called the "Keel-Haul Cup", will be conducted from Hamilton Island in Australia's Whitsundays. The difference will be that the crews will all be accommodated in the Hamilton Towers apartments and the races will all be short affairs, with a combination of fleet and match races. The new Sydney 38 fleet of six boats, operated by Sunsail, will be used to spice things up, without turning the regatta into an elitist affair. The 38 has already developed a reputation on the racecourse as a yacht to be reckoned with. The series will be sailed without spinnakers to keep the racing "laid back" but the 38s offer enough performance to keep even the keenest sailors happy. The courses will be laid around the stunning islands of the Whitsunday to provide plenty of excitement, while Hamilton Island will provide the setting for fun and games of another kind. The yachts will also be available for day cruising between races.

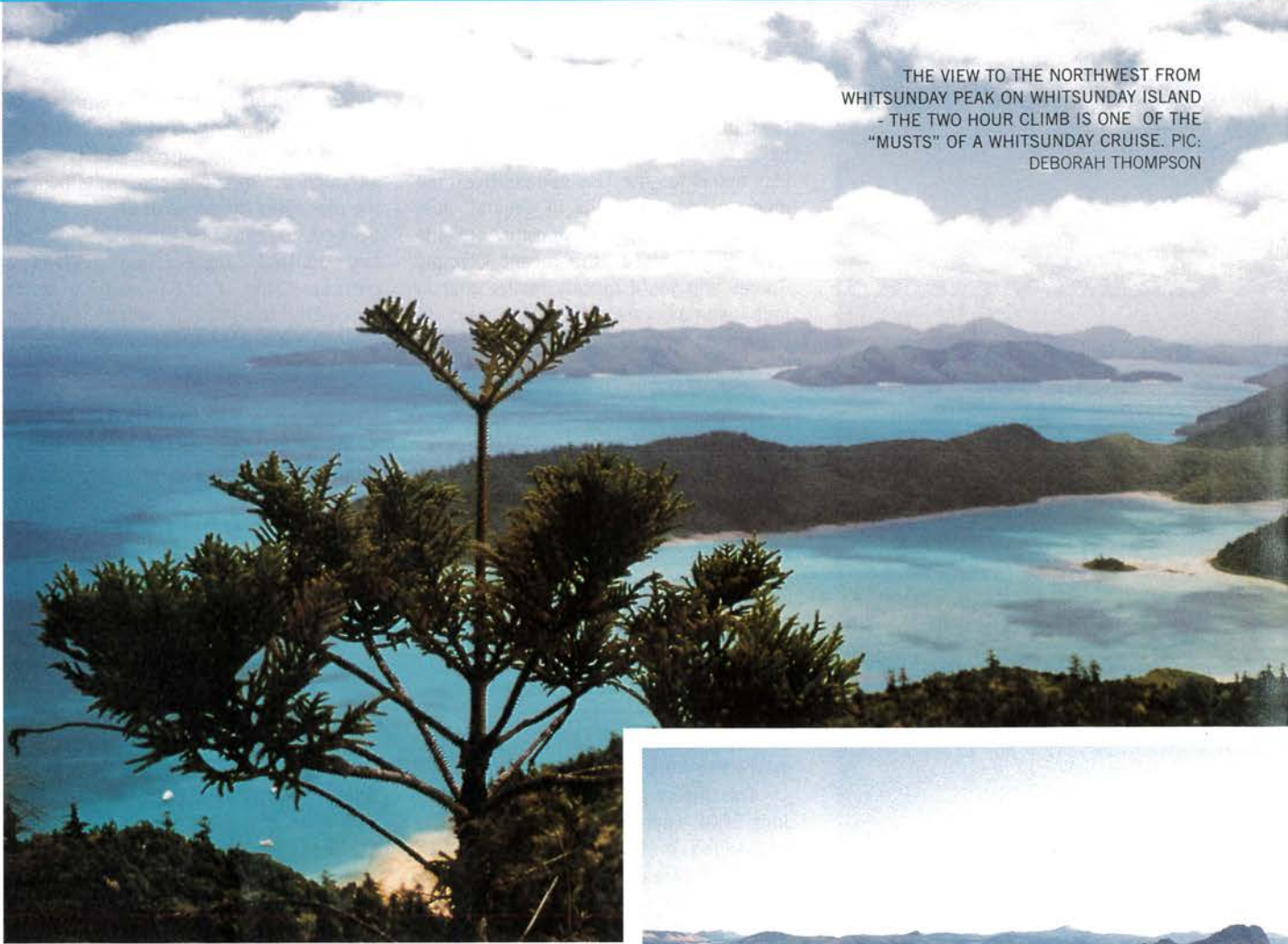
Many participants in this regatta will be drawn from the financial world of the Sydney CBD, many of whom will have competed in twilight yacht races sailed on Sydney Harbour during the summer,



LEFT - "SOFT CORE" RACING IN THE CRUISING DIVISION OF THE HAHN PREMIUM RACE WEEK 2000. (PIC - RICHARD BENNETT)

anywhere in the world. The warm South Pacific Ocean and the spectacular islands became the backdrop for four races over nine days, with the lay days as important as the races themselves.

THE VIEW TO THE NORTHWEST FROM WHITSUNDAY PEAK ON WHITSUNDAY ISLAND - THE TWO HOUR CLIMB IS ONE OF THE "MUSTS" OF A WHITSUNDAY CRUISE. PIC: DEBORAH THOMPSON



where once again the composition of the crews is not far off 50:50. It's a logical extension of Sydney events like the BT Cup, Australian Corporate Games and Sunsail's AAPT Corporate Twilight Challenge Regatta.

The complexion of Hamilton Island Race Week itself is also changing with a growing fleet of chartered yachts- more than 60 in 2000. That's nearly 50% of the total fleet and indicative of the growth of "fun racing".

The charter boats race in the cruising division, alongside privately-owned yachts where the design emphasis has focused on comfort rather than speed. The cruising division now has its own course area, separate from the raceboat divisions. The cruiser courses take the scenic route around the islands, rather than concentrating on the windward/leeward courses like the raceboats. The courses are shorter, to allow more time for socialising, and there is no overnight race. Handicaps are based on performance to give every participant a shot at a prize. The cruising division boats also have their own marinas, distinctive in atmosphere as well as location. While the racers re-play the blood and guts of their race in the bar, the charter boat crews relax over a transom-hung barbecue.

Greg Boller of Sunsail Hamilton Island said recently, "our entire fleet of yachts has been booked for this year's race week for months and if last year's pattern is repeated we will see a growing number of women among the crews. The competition is serious enough but the priority is enjoyment, and the fact that

this year's bookings are mostly repeats says that something must be right" he concluded.

Whilst grand prix racing seems set to continue in its historical male-dominated mode it's also a fact that the grand prix racers themselves are looking for more user-friendly yacht racing options that will attract their partners. Sydney racing icon Peter Sorensen, when offered the opportunity to participate in this year's Aegean Rally, preferred to charter a cruising 50 footer in the Greek Island Odyssey and there will be at least two couples in his crew of 8.

When the end result is more sailing for everyone that's got to be smart.

The Keel Haul Cup, Thai Cup, Tahiti Cup and Greek Island Odyssey are all conducted by Mariner Boating on yachts chartered from Sunsail. For details phone Trevor Joyce on 99669014, fax 99665888, email trevor@marinerboating.com.au or visit the Mariner Boating website, <http://www.marinerboating.com.au>



AUSTRALIAN OFFSHORE CHAMPIONSHIP TO BE AT HAMILTON ISLAND

THE AYF AND THE ORGANISERS OF HAHN PREMIUM RACE WEEK HAVE REACHED AGREEMENT THAT THE POPULAR EVENT AT HAMILTON ISLAND will this year be used to decide the 2001 Australian Offshore Championship.

"We are delighted with this arrangement" said Graeme Ainley, AYF Board Member and chairman of the newly formed AYF Offshore and Keelboat Policy Committee. "Hamilton Island is already a very popular event and attracts some of the leading sailors and boats. We aim to ensure that the Australian Offshore Championship become a major focus for offshore and keelboat sailors. This is a wonderful start."

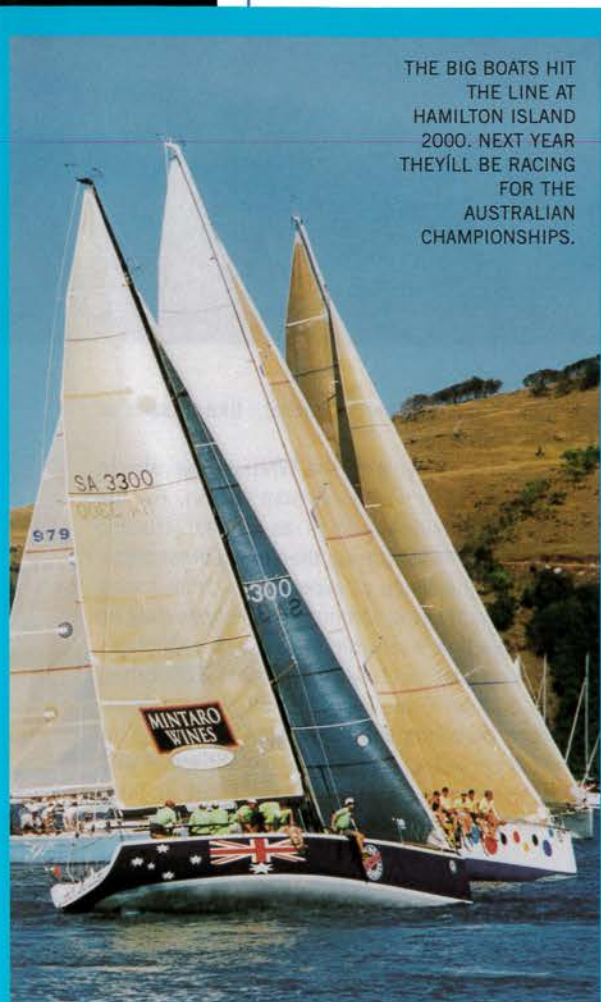
Warwick Hoban, long time organiser of the event, was equally enthusiastic. "The Week can only benefit from being nominated as

the 2001 Australian Offshore Championship. This will be an added incentive for owners to attend, if one were needed. We are looking forward to some great competition this year."

There will be no changes to the well-established format of racing. Hahn Premium Race Week runs from 18-25 August 2001. The winners of the IMS and IRC Divisions will become the IMS and IRC Australian Offshore Champions respectively. During the week, the AYF will host an open forum to discuss the future of the Australian Offshore Championship and other issues relating to the future of offshore and keelboat racing.

The AYF intends in future years to move the Championship around Australia, linking where possible to established offshore events. Expressions of Interest have already been sought of the 2002 and 2003 events.

THE BIG BOATS HIT THE LINE AT HAMILTON ISLAND 2000. NEXT YEAR THEY'LL BE RACING FOR THE AUSTRALIAN CHAMPIONSHIPS.



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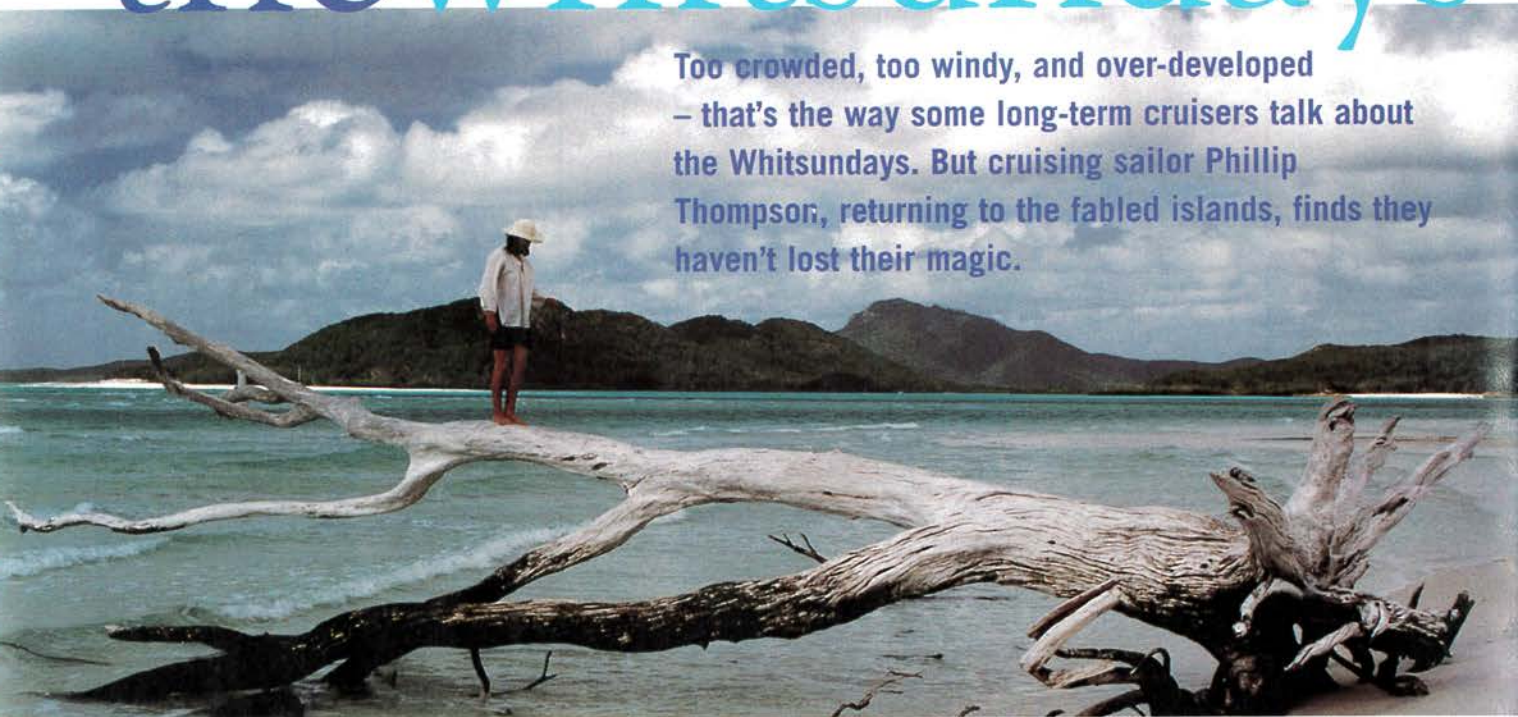
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the whitsundays

are they worth the hype?

Too crowded, too windy, and over-developed – that's the way some long-term cruisers talk about the Whitsundays. But cruising sailor Phillip Thompson, returning to the fabled islands, finds they haven't lost their magic.



IF THERE IS ONE EAST COAST CRUISING MECCA WELL KNOWN IN BOTH SAILING CIRCLES AND THE GENERAL PUBLIC, THE WHITSUNDAYS would be it. Fuelled by a tourist industry and a background of cruisers coming home from the reef, the Whitsundays becomes a dream for many thinking about their first cruise. With the growth of its own bareboat charter industry and a growing backpacker trade all competing with the cruisers on their own boats, the Whitsundays has a lot to absorb and lots of dreams to fulfil.

When we headed up north last year I was a little concerned about the fate of the Whitsundays. It had been seven years since we had last cruised the coast and I was wary of our favourite island chain being changed by overdevelopment. As we headed up the coast we met some cruisers who weren't keen on spending too much time there.

"Too many bloody backpacker boats" we were told by one cruiser sitting on Percy Island. He told us about unseamanlike behaviour by charter skippers of the maxi boats and the perils of the bareboats who used his own boat as a guide for anchoring.

"We ended up anchoring in a spot we didn't like and then moving at 4pm when the bareboats are supposed to be anchored." Other long-term cruisers we met had similar thoughts and our expectations were subtly changed. "We'll just have a

quick look and then head up north further, like Lizard or Hinchinbrook at least." we said.

As it was, we ended up staying in the Whitsundays almost three months, and never got further north than Bowen. For the Whitsundays still deserve their reputation as a great cruising area. Far better for some styles of cruising than many other areas, they are able to offer a wide range of experiences- from racing one design, being part of a floating community, to snorkelling on fine coral and the solitude of a skinny dip in your own anchorage. In the scatter of islands that stretches for almost 100 miles, there is still room for both all of the hype, and all of the dreams.

We did have some problems with bareboats anchoring too close (one occasion), a crewed charter boat being antisocial with its music (one occasion and only I was worried) but in three months I would say that was a fine price to pay for lovely cruising grounds.

The makeup of the Whitsundays is the reason I like cruising in them so much. Further up or down the coast there are lovely bays and islands. The difference between these areas and the Whitsundays is proximity and geography. The compact layout of the Whitsundays means that cruisers don't face the arduous task of 50 mile day passages, but rather easy ten or five mile trips

between anchorages. Although the sea can get rough, the closeness of the islands means that some planning and tricky sailing can see you beating in tradewinds in smooth seas if you are flexible with your timetable. The state of the sea in most parts means that friends or family haven't got to be sea dogs to have fun. The shape of the island group means that the number of anchorages is incredible and almost impossible to exhaust.

Also the islands look good- the geology and climactic conditions conspire to give the Whitsundays many picture-postcard views with stands of Hoop Pine on the sides of rocky peaks and bold granite outcrops. It's a far cry from the low scrub

of the islands in the Broadsounds which is not very tempting.

SAILING IN THE WHITSUNDAYS

The Whitsundays encompass a group of islands stretching over almost 100 miles. However most people seriously cruise the middle section (around Hook and Whitsunday Islands) more than the top or bottom groups. For partaking in the idyllic dreams of cruising while having easy access to services, the middle group of islands are pretty hard to beat.

Depending on who you talk to, sailing the Whitsundays can be idyllic or traumatic. It depends upon your experience with the



OPPOSITE PAGE:
EVEN THE
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AREAS, LIKE
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PICS: DEBORAH
THOMPSON

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Taking Line Honours in the Whitsundays



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Lots of people with very little experience sail the Whitsundays all the time in bareboats. For all the talk of bullets and strong southeasters the Whitsundays is still an easy place to sail. You can get all revved up for strong winds and then find your two weeks has none.



wind. During the main cruising season the predominant wind is the southeast trade which can blow with unrelenting force for a week or two- or so the story goes.

In fact, even the southeasters can be worked around if you have a little time or do some careful planning. A strict timetable may ruin your plans for great sailing. Heading north is usually fine but going south against a constant 20 knots can get very lumpy in certain areas in certain tides. For most harbour sailors, the idea of working tides in a blow is a little hard to accept but it does help markedly. What you are trying to do is not increase your VMG by catching windward-going tide, but waiting for slack tide or northerly going tide before crossing exposed waters. We often experienced an early morning lull that encouraged us to leave our anchorages after an early breakfast if we wanted to head southeast. Remember you may want to travel only eight or ten miles, so it is possible to be anchored before the wind builds again for the day.

This is not to say that the southeasters blow with ferocity every day. Light southeasters and easterlies are common as are northerlies. The problem is that a wind pattern can stay for weeks, giving the transient cruiser or charterer the impression that the wind is always the same. Strong southeasters day after day can get a little wearing for anyone but thankfully you can get



away from them in the anchorages-well, almost! Even the anchorages suffer from the strong winds with the notorious Whitsunday "bullets"- gusts of wind, usually stronger than the wind outside the anchorage, that can make sailing near peaks and headlands very interesting. When sailing in the lee of a peak it is very prudent to keep an eye peeled to windward when the breeze is over 18 knots. The bullets can race down the hills and hit you from more than 45 degrees off the true wind with almost double the windspeed. They can ruin the impression of competence you are trying to give to the crew.

But don't get worried. Lots of people with very little experience sail the Whitsundays all the time in bareboats. For all the talk of bullets and strong southeasters the Whitsundays is still an easy place to sail. If the sailing becomes uncomfortable it is never very far to your destination, or to an alternative one. You can get all revved up for strong winds and then find your two weeks has none.

Unlike other areas of the coast, say behind Fraser or Moreton Bay, depth is not a problem. Although there are few patches of shoal water off areas like Whitehaven Beach most of the Whitsundays are hassle-free in terms of depth. The deepest anchoring spot is likely to be under 10 metres but over 4 metres.



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ANCHORING

The Whitsundays are under the governance of the Great Barrier Reef Marine Park Authority (GBRMPA) who have instituted some rules about anchoring in the more vulnerable areas. Before this, some irresponsible cruisers were anchoring over the coral and even those who tried to minimise their impact could snag coral bommies and tear them up with their anchor chains. To make sure that the coral has a chance to be looked at by people to come, the GBRMPA has laid moorings and distance buoys. If the moorings are full you can anchor but only outside the areas designated by the distance buoys. The system works well enough with boats supposed to stay only two hours on the moorings. You can stay longer if no one else is around and some boats stay all day although this is not in the spirit of the rules.

The moorings are very beefy but some can be a little close to each other. We had a lot of trouble at Langford Island with the tide and wind sending us scooting around close to another moored boat, but for the most part they are fine. You have to pick

Anchoring in the rest of the Whitsundays is “set and forget”. If you put out four times scope and have 30 metres of chain you shouldn’t have a problem.

up the right type for your boat with length restrictions plainly printed on the colour coded buoy. Be careful if you see a different type of buoy close in; – I saw two boats over 10.5m (35 ft) tie onto dinghy moorings. Amazingly as a testament to the ruggedness of the moorings, they held. The bareboat charter boat let go when they were informed, but the cruiser stayed on – reversing the stereotype of who is more seamanlike.

Anchoring in the rest of the Whitsundays is “set and forget”. If you put out four times scope and have 30 metres of chain you shouldn’t have a problem. Any more chain would help in the deeper anchorages but rather than more chain, I would recommend a good anchor winch. Sailing in the Whitsundays can mean three or four different anchorages in the one day, so make sure your boat has something to pull the anchor up. On our last boat I hurt my back the first trip and after fitting the anchor winch found the second trip worry and back-pain free. For those racing boats worried by looks and weight, the low profile winches are small and not too heavy. Ours is manual although electric winches are the norm these days.

The holding in the Whitsundays is very good, which is comforting when anchored in a crowd. When we were heading up the coast I was a little concerned with different bottoms and how the chain would rumble before the anchor dug in. As soon as we were in the Whitsundays the anchor dug in so well each time we up anchored that we relaxed far more and never dragged. A few times when anchoring under sail we went too fast for the anchor to set, but after re-anchoring slowly we were fixed for the night. The lovely holding applies to most areas of the Whitsundays but may not be so true around the top of Hook Island (Butterfly Bay) and at Border Island. In these spots you can feel the chain skipping over some coral rubble before it sets, so either sleep light or try to get a mooring for the night.

One nice thing to do for your fellow anchorers, and this applies anywhere, is to make sure you let out four times the depth in chain and then pull back on the chain with quite some force. Applying reverse gradually but firmly will let everyone else know

that you are well dug in, you are a competent seaman, and you have enough chain out. I watch the chain to see if it is skipping whilst the helmsman sights across to see if we are holding.

Watch when a bareboat comes in with little idea about how to anchor! Many of the experienced skippers of cruising boats will come into the cockpit and give them the stare – an involuntary response which lets you know that you are worrying someone. So anchor well and let them sleep. Sometimes you will give someone the stare and after a while you may feel worried about the other boat’s proximity so you can ask them to move. I did only once this year and the other boat was gracious enough to do so. My concern was that due to the swirling nature of the bullets (up to 180 degree change in wind direction) the newly anchored boat and our boat were likely to collide if we got different bullets, which was likely as they were very localised. So watch all the boats in the anchorage and if they are swinging different ways and the wind is swirling around, give more room than otherwise. Places like South Molle Island and Cid Harbour are prone to this problem.

PLANNING

The Whitsundays offer many things. For snorkelling, head to the top of Hook island and Border Island. You can feed the fish at Manta Ray Bay and see the huge Bump Headed Parrotfish swimming in schools of 20 at nearby Hayman island. For good anchorages when the wind is really hooting from the southeast head to Nara Inlet and go up the creek for half a kilometre to the swimming hole or head to Cid Harbour for a three hour walk to the top of Whitsunday peak and a stunning view.

For night life you can book into one of the resorts like Hamilton. For socialising and the beach experience Whitehaven has plenty to offer. If you like gunkholing, look into Hill Inlet and the top of Gulnare Inlet. If the crowds get to you, go to one of the lesser-known anchorages or head south to Lindeman, Shaw or beautiful Thomas and Goldsmith. All of these different experiences packed within a short distance is what makes the Whitsundays special for me. I can understand the concerns and reservations of less gregarious and more experienced cruisers- after a time the same experiences, as good as they are start to pale – but for those who haven’t experienced them yet, the Whitsundays are the gem of the Queensland coast.



MANY CHANGES FOR MOORINGS

YEAR 2000 SAW MANY CHANGES FOR THE MOORINGS IN AUSTRALIA. Richard Ray, who has over twenty years experience in the charter industry and ten years with The Moorings, relocated from NZ to Australia in September 2000 to head up a new focus on growing the company's business in Australia. This began with relocating the operation from the southern side of Hamilton Island harbour, to new facilities under the Yacht Club on the Island's front street. The Moorings introduced five new vessels to their Hamilton Island fleet towards the end of 2000 and relocated two additional Beneteau 50s from New Zealand to meet the increasing demand for larger yachts. The company plans on adding a further five new yachts in 2001, which will bring the average age of the fleet to under 18 months.

The fleet comprises of Beneteau and Jeanneau monohulls and Fountaine Pajot catamarans including the new FP Bahia 46 which was introduced in October 2000. The FP 46 is the largest bareboat catamaran currently operating in the Whitsundays and has proven to be a very successful addition for the Moorings.

The company plans on introducing two South African built Robertson and Caine catamarans later this year as the new Moorings 4200. The first boat is close to completion and is due for launching in Capetown mid May. We expected the boat to be as successful as her bigger sister the Moorings 4500, also built by Robertson and Caine, which in 1998 was voted by "Cruising World Magazine", as Charter boat of the Year. The Moorings has consistently worked with leading yacht builders and designers for the past 30 years introducing new and innovative ideas to charter yacht design and this yacht is no exception. The yacht will be "spec'd" extensively and comes standard with air conditioning. ❖



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war games

takes Quin's Blue Water Classic

By Craig Evans, navigator of SAP Ausmaid

THE 51ST ADELAIDE TO PORT LINCOLN YACHT RACE, NOW KNOWN AS THE QUIN'S BLUE Water Classic, attracted a total of 98 local and interstate yachts competing in both racing and cruising divisions.

The race, a sprint of just over 150 miles is organised by the Port Lincoln Yacht Club in conjunction with the Cruising Yacht Club of South Australia and the Royal South Australian Yacht Squadron.

It begins at North Haven, with yachts travelling south along the Adelaide coast to a turning mark at the seaside suburb of Henley. From there, they travel south west across the Gulf St. Vincent to Marion Reef then westerly across the foot of the Yorke Peninsula to Cape Spencer then north west across Spencer Gulf to Dangerous Reef and continuing to the finish at Port Lincoln in Boston Bay.

The course from Adelaide to Port Lincoln involves negotiating shallow water on the Adelaide foreshore and navigating around several islands and small reefs along the way.

The turning mark 200 metres from the end of the Henley Jetty was only introduced this year to lift the event's profile to the general public. It seemed to work with thousands of spectators lining Adelaide seaside suburbs to view the race. A new trophy, the Simrad Cup, was awarded to the first boat around the Henley mark.

The race started in perfect conditions with Kevan Pearce's Farr 47 Ausmaid, helmed by Roger Hickman, quickly taking the lead closely followed by the Davidson 53 Prime Example, War Games, and the Murray 42 Secret Mens' Business. With 400 metres to go to the Henley turning mark the south westerly breeze died. Yachts started to bunch up. David Urry in his new Farr 40 OD War Games, closer to shore, took advantage of the building breeze from the south east and went from third to round two boat lengths ahead of Ausmaid followed closely by Graham Williams in Prime Example.

The 36-mile leg from Henley to Marion Reef saw Ausmaid regain the lead. The breeze built to around 20 knots and yachts quickly spread out as they two sail reached the next 46 miles to Cape Spencer.

After clearing Reef Head off of Cape Spencer (where Doctel Rager came to grief on the return from last year's race) yachts raised their spinnakers and headed for

Dangerous Reef.

Chris Tillet's Mumm 30, On The Edge lived up to its name, sailing over Emmes Reef, fortunately (and miraculously) without hitting it.

Ausmaid's bow person, Charlotte ("Charlie") Stacey, unfortunately came off second best breaking her two front teeth after being hit in the mouth with the spinnaker pole on the approach to Dangerous Reef.

Ausmaid crossed the finish line at 7.19am to complete the 155-mile race in 16 hours 19 minutes, finishing first ahead of Prime Example and War Games. The Radford 10.5 Monkey Puzzle from Port Fairy was first small boat home in fifth place. Bill Strangway, sailing the Farr 1104 Speakeasy, was fastest in Division II. The first cruising yacht home was Wind Torque, completing the race in 22 hours 13 minutes, ahead of Negotiator and Adria.

On IRC corrected time War Games was first, followed by On The Edge and a Port Lincoln crew headed by David Buckland in a chartered Sydney 38, 38 Degrees South.

Local Port Lincoln yacht Rhythm II, a veteran Spencer 40 owned by Lewis, Clough and Roesler was a popular Overall and Division II winner in the Arbitrary Handicap Division. Secret Men's Business (Geoff Boettcher) was second overall and Division I winner.



CHRIS TILLET'S OUTSTANDING MUMM 30 ON THE EDGE (SEEN HERE ON HER WAY TO VICTORY IN THE CLASS NATIONAL TITLES) WAS SECOND ON IRC.

PICTURE BY IVAN SKELLETT

IRC

1	War Games	Farr 40 OD	Urry
2	On The Edge	Mumm 30	Tillett
3	38 Degrees South	Sydney 38 OD	Buckland

Division I (Arbitrary)

1	Secret Mens Business	Murray 42	Boettcher
2	Lincoln Cove	Inglis 11.7	Kelsey
3	Sweet Caroline	Dubois IMS 44	Flint

Division II (Arbitrary)

1	Rhythm II	Spencer 40	Lewis/Clough/Roesler
2	Phoenix	Northshore 38	Saies
3	Speakeasy	Farr 1104	Strangways

Port Lincoln Yacht Club Commodore, Steve Kemp, and his team not only conduct great racing, but also make visitors feel very welcome. With the support of Quin Marine as the major sponsor this event grows each year. Mark it in your diary for next March!

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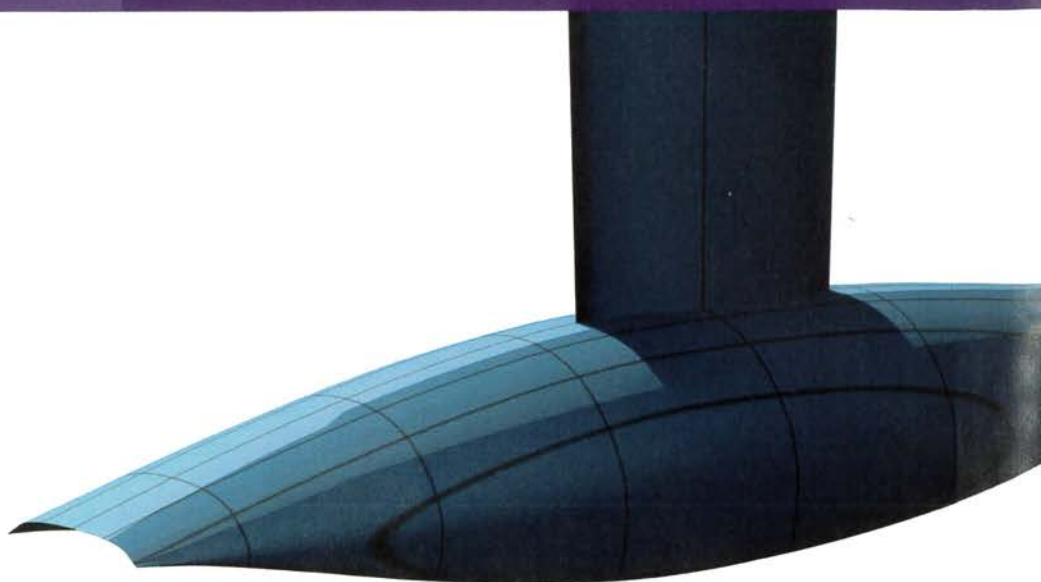


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nicorette

– optimisation in action

NICORETTE'S DOUBLE (LINE HONOURS AND IRC CORRECTED TIME) IN THE LAST TELSTRA Sydney to Hobart was an example of what can be done by designing a boat that can be aggressively optimised for different conditions.

As reported in earlier issues of Offshore, Nicorette did her early racing in downwind mode, with lighter

another. Secondly, he had thought of reviving trim-tabs, penalised out of "mainstream" offshore racing - and he had a letter from the IRC rating office, confirming that they would be free of rating "tax" for at least the next two years. New Zealand designer Brett Bakewell-White drew up a new keel and rudder, and from her very first meeting with reigning

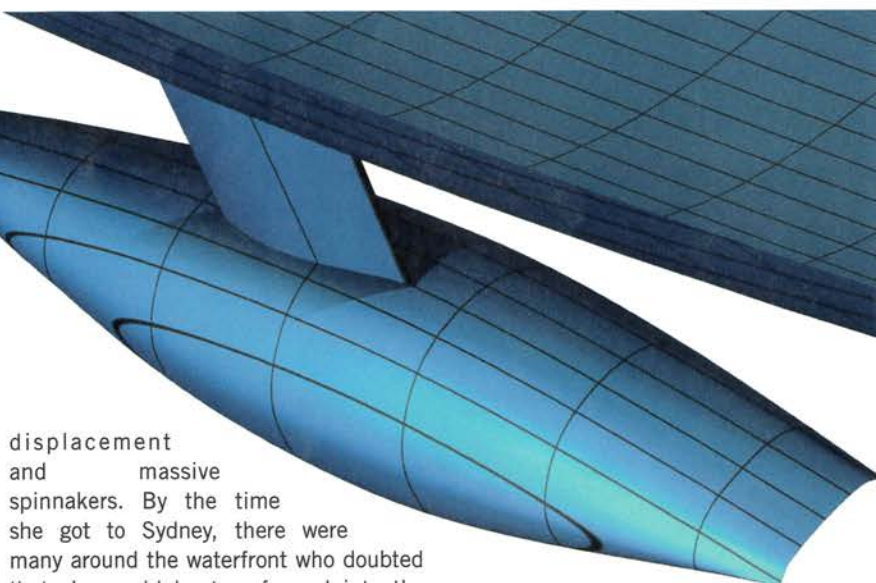
keel designer's comments – brett bakewell-white

The keel fin is from Bisalloy Steel with the carbon composite trim tab mounted on stainless steel gudgeons. Kevlar fairing flaps are utilised to fair from the foil to the tab. The lead is all contained within the bulb that was poured in two halves and then bolted to the end of the steel spar.

As Ludde has alluded to, there have been some teething problems with the tab and so it may well have been a hindrance rather than a help during the Hobart. CNC milling was used extensively for the construction of both the keel and the rudder giving extremely accurate foils - this is critical to performance, especially when the foils are relatively small.

The bulb is a laminar-flow section which contained 2.5 tonnes more lead than the boat's original bulb. The edges of the beavertail on the bulb are turned down, to give some of the end-plate effect of a wing without the rating penalty.

A new rudder was also fitted. This is more upright than the original rudder and has more balance, to reduce the weather helm that was previously experienced.



displacement and massive spinnakers. By the time she got to Sydney, there were many around the waterfront who doubted that she could be transformed into the upwind performer that's needed to win the Hobart.

But Ludde Ingvall had two cards to play. First, he had a boat specifically designed to be altered from one mode to

champ Shockwave it was obvious that Nicorette's "connections" had done the trick – Nicorette was definitely a contender.

designer's comments – alexander simonis

Nicorette was designed keeping the then-new IRM rule in mind. Ludde wanted a fast boat most of all, based on his experience that getting line honours was the thing to go for and when getting that about half the time one could make handicap honours as well.

The boat was originally envisaged with a keel/bulb configuration as currently fitted, but as its first race would be the light downwind Rio Race it was decided to optimize here for this with extra sail area and a smaller bulb. The result was heavily biased to a downwind flyer, obviously paying the price upwind.

Nicorette's rather extreme hull shape is evolved out of doing light displacement boats which had to be good all round performers. Being light, there is little inertia to drive the boat upwind through a chop, to counteract this one wants to

minimize the resistance though making the frontal area as small as possible and at the same time have a good ability to penetrate a head wave without being lifted too violently as this would start a rather harsh pitching motion resulting in a large speed drop.

This is achieved by designing the forward sections with a long waterline with very little buoyancy. Next to this there is the quest to generate maximum power and stability by putting as much ballast as low as possible, again with minimum resistance, and carefully trying to balance the effect this has on pitching motion in order not to overdo it which again would result in a boat with bad upwind performance.

On Nicorette I think we managed to balance this well. The boat has lost some of its early downwind speed, but gained much more upwind.

owner-skipper's comments – ludde ingvall

The most dramatic change to Nicorette was that her lightning-fast downwind performance was seriously decreased by cutting down the spinnaker size and increasing displacement by over three tons.

Secondly, the most dramatic change in the upwind performance came from the fact that the displacement increase was all in the bulb, dramatically changing the boat's stability. The increased displacement also sunk the boat a bit, which increased Nicorette's hull-form stability as well as lengthening the waterline. This was originally envisaged by the boat's designers Simonis and Voogd and in fact the old keel blade was built to handle this.

I decided to go for the Bakewell-White keel as I wanted to decrease wetted surface to compensate for the effect the increased displacement would have on light air performance. The associated decreased lift of the small keel I asked to have compensated by introducing a trim tab, which was not so favourably received by the team! I felt that the trimtab would not carry too big a penalty, if any at all, so it was worth the risk.

As it turned out, the trimtab did not help us, of that I am convinced. It will take a lot more time to figure out the correct settings for it, how it works in an offshore seaway and how much we pay for the uneven surface which you get from the tab, as well as when to use it and when not to.

Firstly, downwind it does not help and actually increases drag if anything as the surface cannot be totally fair. Secondly when we got on the wind, we caught and passed Shockwave with such a speed difference that I doubt that the tab changed anything. We were at worst three miles (about 15 minutes) behind when she first crossed us and three or four hours later we were only three minutes behind on the Green Cape report. Also we were overstanding the mark at that time so the tab was not used.

Finally, the kevlar flap that covers the joint between blade and trim tab and their hinges was missing at the finish. I believe that the most likely time when this tore off was at the 20+ knot top speeds early in the race, rather than during the 10-11 knots upwind work.

The missing flap must have increased drag and turbulence to quite some amount, as we can feel now when we have been sailing in the harbour. In fact without the flap it feels like the tab only works on one tack.

All in all, there is no question that the new keel, bulb and rudder are a success and we look forward to get racing in Europe where in the calm Baltic waters we will have time to fully evaluate what we have and how it has transformed the boat against boats we know.

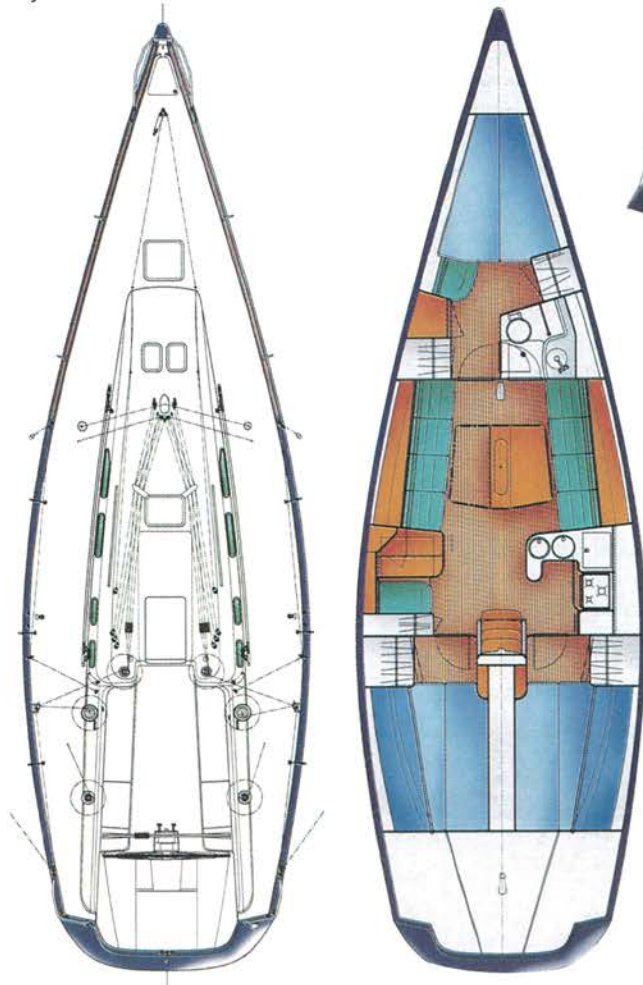


IMX 45

DANISH BOATBUILDERS X YACHTS ARE HOPING TO EMULATE THE RACECOURSE AND sales success of their IMX 40 (currently being completed at the rate of two per week) with the IMX 45, due out in early 2002.

Niels Jeppesen is a designer who generally follows a theme throughout a range of designs, so it's no surprise to find the IMX 45 will conform very closely along the style of the IMX 40.

"The hull lines are quite similar to the IMX 40 philosophy with a very fine and sharp bow, medium displacement, a medium wide body which ends in a relatively high aft overhang" say X Yachts. "The keel and rudder design will also follow the very succesful IMX 40".



"The deck layout will have a 185 cm diameter carbon wheel, mainsheet run below deck surfaces, and operation of the permanent backstay via a newly developed 'twin wheel' system."

"The sailplan will be brought further aft compared to the IMX 40. This will increase the performance in choppy sea (sail centre closer to the centre of buoyancy) as well as allowing a recessed furling drum."

The rig includes carbon mast and boom. The keel will have the same racer-style big bulb and high-aspect foil as the IMX 40, which together with the 8 to 10 degree sheeting angles (tight for a cruiser-racer) should provide good upwind ability.

The accommodation is basically an expansion on the 40's interior, almost identical

in layout. X Yachts's designers tell us that the boat can be fitted with folding berths in the saloon so a total of five crew can sleep to windward.

preliminary dimensions

LOA:	13.76 m
LWL:	11.97 m
Bmax:	4.15 m
Disp.:	9100 kg
Draft:	2.75 m (approx.)
IMS Sail Area:	105 (approx.)
IMS GPH:	563-573



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HM1300

designer's comments – robert hick

"The brief called for a two handed cruiser/racer that was both comfortable and fast, with a lifting keel to reduce draft to 1.3 metres. Above all, it must be safe and capable of extended ocean voyages."

"The end result is a narrow hull form based on our successful IMS 35 Midnight Rambler, which showed excellent speed and handling in winning the storm-swept '98 Sydney to Hobart. The narrow hull exhibits good sea-keeping and is not as reliant on crew weight as wider designs. A moderate displacement of 7,300 kg and generous sailplan will ensure good performance in all conditions. Stability comes from a deep cast iron fin with lead bulb and 450 kg of water in tanks port and starboard that can be used for extra fresh water when cruising."

"Our client had some very firm views on the internal layout and lifting keel mechanism; 'I don't want the interior of

the boat ruined by a centreplate case that might only be used once or twice a year'. The solution is a half case/box that is supported by two carbon beams that run to the deck head. With the keel down, the hydraulic lifting ram retracts into the keel and the box has an upholstered top that doubles as a seat for the galley. The lifting rudder consists of two telescopic shafts that allow the lower half to retract in the hollow top section."

"Construction is in cedar strip with e-glass/epoxy skins and engineered by High Modulus NZ. Internals are in foam/glass/epoxy."

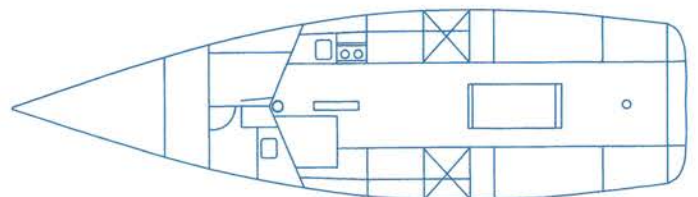
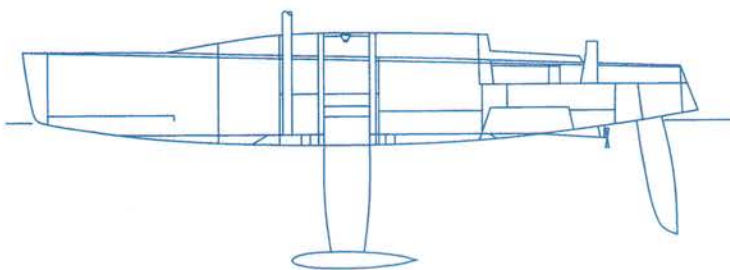
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LEFT – THE HM 1300 SWIFTY.
RIGHT – THE "HALF CASE" FOR THE LIFT KEEL KEEPS THE INTERIOR OPEN.



LOA	LWL	BEAM	DRAFT	DISPLACEMENT	I	J	P	E	LPG	IRC
13 m	12 m	3.6 m	2.67 to 1.2m	7,300 kg	16.7	5.1	17.6	6.3	5.34	1.170



TEST

first 31.7

**Beneteau's
First 31.7 is
a worthy
little sister
to the famed
40.7**



WITH THE RACING AND SALES SUCCESS OF BENETEAU'S HIGHLY SUCCESSFUL 40.7, IT'S BEEN EASY TO OVERLOOK THE SMALLER BOATS in the range. While the 40.7s have been racing internationally, the baby of the first range, the 31.7, has been quietly twilighting and cruising. It's not until you actually sail aboard and race against Beneteau's "little" cruiser-racer that you realise it has the same mixture of pace and space as its big sisters.

DESIGN AND CONSTRUCTION

The 31.7 and its predecessors were designed by the French Finot group, famed for their round the world singlehanded winners and known for decades for their ability to make beamy boats go fast. Brendan Hunt from Beneteau Vicsail says that Beneteau's analysis shows that Finot designs outperform even Farr Yacht Design (designer of the larger Beneteaus) when it comes to packing maximum volume into a small hull without losing too much

performance. The 31.7's hull is typically Finot - a very long waterline, full and deep bow sections, full sections above the waterline, a very wide stern, lots of beam and high freeboard.

The 31.7 is actually a development of the 1992 vintage Beneteau First Class Solo, which was created as the one-design for France's popular Figaro singlehanded race. The same hull, with extra freeboard, was the basis for Beneteau's First 310 and the Oceanis 310 cruiser. Now that same basic shape has been extended and fitted with a different rig and foils as the basis for the First 31.7.

There's been very little change in Finot's hull shape since the Solo. That's not a criticism, because (rule optimisation apart) it seems that the development of cruiser-racer hulls has reached a plateau over the last few years. The developments have been in keels, rudders and rigs.

Compared with the 310, the 31.7's keel and rudder are

deeper, more upright and of higher aspect ratios. The keel's fin is smaller, the bulb much larger and the ballast 200kg heavier. The keel is iron and the ballast ratio is quite low (28%) but the draft is deep for a cruiser-racer (1.9m) and the bulb is large, so the ballast is more effective than the bare figures indicate.

The 31.7 has the sailplan that's become the norm for a cruiser-racer; an almost masthead rig with 140% overlap headsail. Beneteau Vicsail are importing the boats with a racing kit as standard, so the boat comes complete with spinnaker gear, a quality rope package, Tuff Luff and folding prop.

The 31.7's hull is solid GRP in polyester resins, with support provided by a GRP moulded structural frame. The deck is balsa sandwich. The engine is a 14.5kW (20 h.p.) Volvo 2020 saildrive. Access, through removable panels in the front and rear, is good.

ACCOMMODATION

The Finot hull gives the 31.7 a huge amount of volume down below. The layout and aesthetics are conventional, probably because the conventional works so well. There's a vee berth in the forepeak along with a hanging locker and good stowage. Headroom is about 1.75m, but there is no standing room when the infill is used to convert the vee berth into a double.

The saloon is very large and has headroom ranging from 1.82m to about 1.75m. There are comfortable settee berths each side of a large drop-leaf table. Abeam of the companionway to port is the galley, complete with 12 volt refrigerator, hot and cold pressure water, and a stove with oven. Like many galleys, it did seem light on convenient stowage for food. To starboard is a chart table with more than ample space for instruments.

The aft cabin includes sufficient floor space to dress, 1.80m headroom, two opening ports and a double berth. The intrusion of the engine box means that the double is about 1.85m long on the inboard edge and over 2m long on the outboard side. Opposite is the head, with shower and a bin for wet-weather gear.

Ventilation in the area behind the mast is provided by the six opening portlights but (as in many modern boats) there would be little ventilation if bad weather forced the



portlights and hatches to be closed. Fiddles and handholds are sufficient for a boat of this size.

There's a massive cockpit locker to starboard, with space for a complete racing sail wardrobe and a useful large shelf for smaller items.

Finish and trim are to the usual Beneteau standards; lashings of timber (plywood with mahogany veneer) and full GRP or fabric linings everywhere else. The simple mahogany and white colour scheme of the test boat was an effective combination.

UNDER WAY

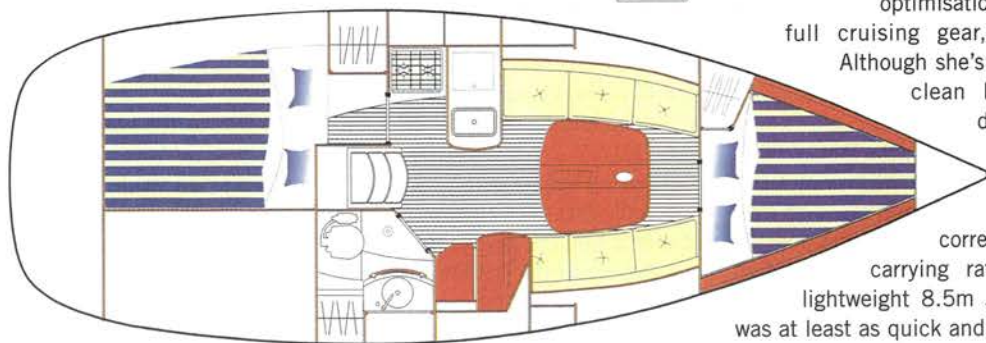
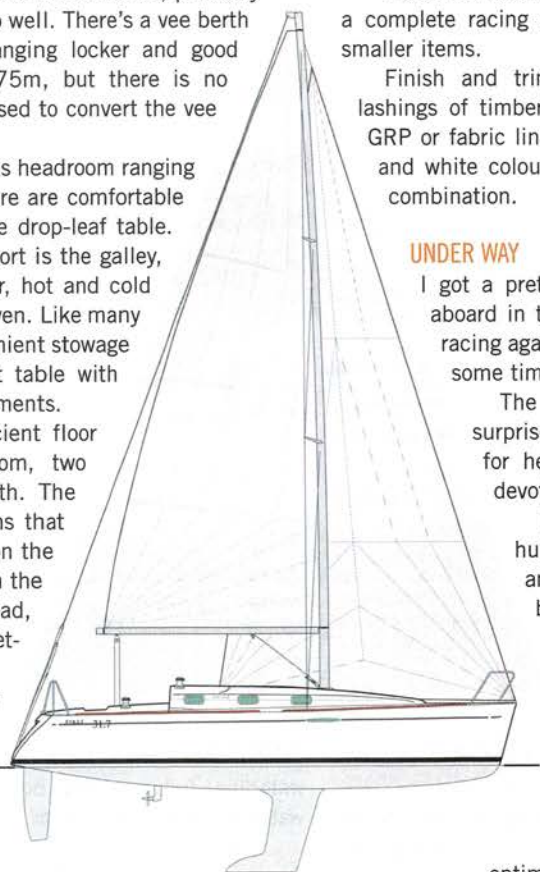
I got a pretty good view of the 31.7; one day racing aboard in the Beneteau Cup regatta, a couple of days racing against another 31.7 in the JOG state titles, and some time at the helm during a test sail.

The overall recollection is one of surprise-surprise that a boat with so much accommodation for her size and so much of her displacement devoted to furniture, can move so well.

It's a tribute to the form stability of the Finot hull that the 31.7 is surprisingly controllable and sensitive upwind despite the modest ballast ratio. She responded well to gusts, remaining well-balanced and answering well to the rudder. The power of that big headsail also pulls the boat along well in light winds.

The 31.7 Touche was sailed by a good crew, including Olympian Matt Hayes, in the JOG state titles. Considering that she rated high (because of a lack of optimisation and large spinnakers) and carried full cruising gear, her performance was impressive.

Although she's a big boat the 31.7 has the full ends, clean lines and big sail area that spell downwind speed in moderate conditions. On square runs she seemed to have a boatspeed edge on the Young 88 that won on corrected time (which was handicapped by carrying rating-conscious small kites) and the lightweight 8.5m JOG racer Tow Truck. Upwind Touche was at least as quick and probably slightly faster than the Young





and Tow Truck, although in choppy conditions offshore she didn't move quite so well.

To judge from Touche's performance and the official French cruiser-racer handicaps, it seems that the First 31.7 is very competitive on the water against much lighter racer-cruisers. According to the official French handicaps, the 31.7 is a couple of percent faster than the 310 and as quick as the older First 35s5. That's a significant advance in speed, but at least as important is the improvement in controllability. The IRC rating (about .963) is also fully competitive

In its first incarnation, as the First Class Solo, this hull was tricky when pushed hard downwind, a trait which stayed with the First 310. By contrast, we never had any control problems when I raced the 31.7. Both the crew and competitors of Touche report that the boat handled well up and down wind, even in breezy offshore races that saw other boats break gear. It seems that the extra weight and the more modern foils have done the trick.

The boat is comfortable to sail. The "driving seat" is good; there's an excellent adjustable foot-brace, a good adjustable Spinlock tiller extension, the mainsheet and traveller are conveniently to hand and the latter is easy to play with. However the cockpit is very wide, and those with short legs find it a long stretch to brace themselves on the leeward seat when sitting in the cockpit.

The First 31.7 sells for \$180,000 without sails or electronics but complete with refrigerator, hot and cold water, and all cruising conveniences. ❖

Chris Thompson

LOA	LWL	BEAM	DRAFT	DISPLACEMENT	MAINSAIL	GENOA (140%)
9.5m	8.8m	3.23m	1.9m	3,600 kg	24.7m ²	28.7 m2

the power of zero

One of the key changes to the next Volvo Ocean Race is the introduction of the massive masthead genoas known as "Code Zeroes". Offshore's Chris Thompson sailed aboard the Assa Abloy team's training boat to see what life will be like when these sails filter down to smaller boats.

THE MOST IMPORTANT CHANGES SINCE VOLVO TOOK OVER THE ROUND THE WORLD race are the introduction of new legs in Europe, the introduction of carbon masts, and the freeing up of the restrictions on Code Zero headsails.

"The VO60 rule is very restrictive" says Steve Morris of Farr Yacht Design, who are designing most of the boats for the next race. "We have been very challenged to squeeze a bit more performance out of these boats given that most rule requirements have actually moved in a conservative direction, making our job harder and harder.

"The biggest effect of the carbon masts will be superior sail control and hopefully higher reliability" says Morris. "The expected weight savings from the alloy to carbon change have largely been offset by the high minimum weight enforced for the carbon spar and the weight increases imposed upon the interior structure by new rules."

It's generally expected that the new boats will be beamier to create more stability to handle the big new Code Zeroes. "There have been many issues influencing the beam of the new boats" says Morris. "For sure the new masthead genoas require more power, but the race has also changed from last time. There are a lot more miles of inshore sailing, the legs around Europe count just the same as the more famous challenges in the Southern Ocean. Each team has had to deal with the tradeoffs in this area and each has arrived at a solution that reflects their view of what makes a race-winning boat."

The new Code Zeroes are massive genoas, set on a furlers stretching from the tip of the bow to the masthead. "The removal of minimum mid-girths on the old Code Zeroes has turned them into true

masthead genoas which will make the boats a lot more powered up in light airs upwind sailing" notes Morris. "However each masthead genoa takes a spinnaker slot so each team has to optimise their sail selection on a leg by leg basis."

Offshore had the chance to check out one of the rigs being developed when we



sailed on the 60 Assa Abloy. Assa Abloy (the old Chessie Racing and Beau Geste) a standard Farr design from the last Whitbread, stayed in Pittwater for some time after the Hobart, selecting crew and developing new sails and spars.

Skipper Roy Heiner, Olympic Finn medallist and a leg winner of the last Whitbread race, has entered an exclusive deal with Australian firm Carbontech International to provide Assa Abloy's mast. The spar they were trialling during

our sail was an early version with very little taper, to handle the tremendous loads imposed by the Code Zeroes.

The Code Zero is stored rolled along the luff. Hoisting, in the calm conditions of the morning, was simple; just bounce the "sausage" of rolled sail to the masthead and then wind on the sheet- just like unfurling the roller-reefing jib on a charter boat. But no charter boat jib was ever stressed like this. The luff lines of many of these sails are 20 mm of an "anti-torque woven" kevlar, designed not to twist when the sail is rolled and unrolled. The halyard was locked off and the tack was wound down on a boat-breaking 8 to 1 cascade system leading to a Lewmar 35 winch. Even if you stood on the purchase mid-way along the foredeck, it only sagged a couple of centimetres. And then the real power went in, when skipper Roy Heiner cranking on the hydraulic topmast backstay while the crew stood back.

How much luff tension was the Code Zero carrying? There was no load cell in position, and no-one was saying. But looking up the luff, there seemed to be very little more sag than you'd expect on a "normal" Number 1 headsail on a forestay.

The old Whitbread boats, which were designed to be slower than IOR maxis, were sluggish in light winds because of their small rigs. But once the Code Zero was sent up the boat powered up. With ballast tanks empty in just a few knots of wind the boat felt fully powered, while on the helm the boat felt light and sensitive. Even on the foredeck you could feel the power, and the stress, of the big sail.

The lessons of the Code Zeroes won't stay with the Volvo 60s. These sails will spread into smaller and bigger boats. We can all just be glad that it's the Volvo crews who have the job of sorting these sails out. ♦

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VOLVO PENTA

NAUTOR JOINS VOLVO OCEAN RACE

Nautor, the world renowned builder of fine racing and cruising yachts, has launched the Nautor Challenge for the 2001-2002 Volvo Ocean Race with two new VO 60s being built in a French shipyard, under Nautor's responsibility.

This brings to seven the confirmed number of syndicates currently building boats for the Volvo Ocean Race which starts from Southampton, England, this coming September.

The Nautor/French yard currently has two VO 60s in mid-construction,

one a German Frers design, the other by Bruce Farr whose designs have won every Whitbread round the world race since 1985. Supervising the building project is Paul Cayard, the most recent winner of the Whitbread Race around the world, now the Volvo Ocean Race.

Sailing director for the Volvo campaign will be New Zealander Grant Dalton. Dalton is currently at sea, skipping the maxi catamaran Club Med in The Race nonstop circumnavigation event.

- Peter Campbell

BRITISH CHALLENGE FOR 2002-2003 AMERICA'S CUP

After an absence of 14 years, a British challenger seems likely to be on the line when the Louis Vuitton Challenger Series for the 31st America's Cup starts in Auckland, New Zealand, in October 2002.

GBR Challenge Company Ltd (GBR Challenge), the first British challenge since 1987, has been set up by successful yachtsman and computer internetworking I.T. entrepreneur and pioneer Peter Harrison, who last year sold his company, Chernikeeff Networks, for a total of 300 million pounds.

To accelerate the technology "catch up" Harrison has purchased from the Nippon Challenge Syndicate two, 2000 generation, plus one 1995 International America's Cup Class (IACC) yachts which competed in the last America's Cup challenge rounds in New Zealand.

These yachts will enable the GBR Challenge sailing team, headed by two-times Olympic sailing silver medallist Ian Walker, to undertake a two-boat training program in UK waters. This will provide the benchmark data to aid the development of new IACC yachts as well as giving the sailing team maximum experience on the latest technology designs.

- Peter Campbell

165TH AUSTRALIA DAY REGATTA

The prestigious City of Sydney Sesquicentenary Trophy for the 2001 Australia Day Regatta ocean race from Sydney Harbour to Botany Bay and return has been won by True North, owned by Howard and Susan Piggott. True North, a Beneteau 40.7, was Overall IMS winner of the race which attracted a fleet of 53 starters. Line honours winner was Neville Crichton's maxi, Shockwave.

Howard Piggott, a former Hobart yachtsman now living in Sydney, has enjoyed considerable success with True North since buying the boat last year, and going to press was sharing equal first place in the CYCA short ocean pointscore with

the Sydney 40, Davnet, skippered by Jamie McPhail.

In another prestigious interclub win for a CYCA boat, the Farr 40 One Design, Syntegra Rapscallion, skippered by Dick Voordehake, has won the Royal Sydney Yacht Squadron's Milson Memorial Cup, sailed off Sydney Heads, for the second successive year.

Rapscallion won on PHS corrected time from line honours winner, Shockwave, and SAP Ausmaid, Kevan Pearce's winner of the 2000 Telstra Sydney to Hobart.

- Peter Campbell

AUSTRALIA II BACK ON CAMPAIGN TRAIL FOR COWES

The America's Jubilee Cowes 1851-2001 at Cowes, England, in August promises to be one of the most spectacular yachting regattas ever held, with competing yachts ranging from the replica of the original schooner America to the wing-keeled winner, Australia II.

Australia II is back in Perth after being a keynote exhibit for years at the

QUOKKASAILING.COM CLOSES DOWN

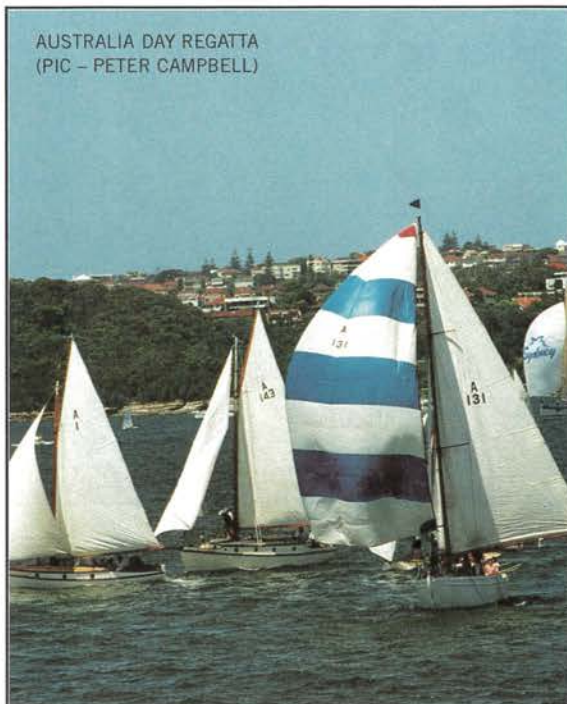
Reports from the United States say that Quokka Sports, the online broadcaster founded by Australian America's Cup winning skipper John Bertrand, has sprung a leak.

According to the Wall Street Journal & Bloomberg, Quokka last year lost \$US 150 million from revenue of \$US 47 million, leading to an announcement this week of a second round of staff cuts in three months.

Subsequently, an email from editor Sean McNeill announced that QuokkaSailing.com was closing down immediately.

Since its inception, QuokkaSailing.com has played a key role in bringing worldwide coverage on the web of major yachting events, with real-time news and feature reports, supported by superb graphics, of such events as the Whitbread Race, the America's Cup, the current Vendee Globe and The Race. It was to have provided the web coverage of the 2001-2002 Volvo Ocean Race.

- Peter Campbell



AUSTRALIA DAY REGATTA
(PIC - PETER CAMPBELL)

Australian National Maritime Museum in Sydney. A group of management and crew involved in the 1983 winning Challenge have formed a syndicate to campaign her at Cowes where old 12-Metre yachts will be a featured class.

Headed by Warren Jones, who managed the Australia II Challenge at Newport, Rhode Island, the syndicate needs to raise \$750,000 by mid-April to campaign the yacht at Cowes.

Jones says the syndicate needs a major sponsor or benefactor who realises it would be an international sporting tragedy to commemorate the 150th anniversary of the America's Cup without the first yacht to break the New York Yacht Club's 132 year grip on the Cup.

As Jones says, the victory of the Ben Lexcen-designed, wing-keeled Australia II over Dennis Connors's Liberty had an enormous impact on the sport of yachting; it had, perhaps, an even greater impact on the Australian nation. - Peter Campbell

FULL MOON SAIL TO THE SOLOMONS

On June 2, 2001, three days before a full moon, an expected fleet of 15 yachts are due to leave Brisbane for Gizo, course 005, distance 1175 nautical miles, in the fifth annual Sail the Solomons Yacht Race.

The last race to Gizo, in May 2000, was sailed in varying winds, with the south-easterly tradewind the dominant breeze. This year's race has been delayed until June to allow the more consistent south-easterly trades to set in.

For Notice of Race contact Ocean Racing Queensland on www.oceanracing.net or email info@oceanracing.net

- Peter Campbell

TO WOLLONGONG...AND BACK FOR BREAKFAST

Like the people of Hobart, the residents of Wollongong did not get a glimpse of super maxi Shockwave - and seemingly won't in the future. With owner Neville Crichton at the helm, Shockwave outpaced George Snow's Brindabella in the annual Sydney to Wollongong Race, crossing the finish line off Flagstaff Hill shortly after 1am following a five hour Friday race.

Faced with the prospect of tying up alongside a commercial wharf in the coal and steel port of Port Kembla (Wollongong's Belmore Basin was too shallow for the maxis), owner/skipper Crichton headed back to Sydney, arriving in time for Saturday breakfast at the CYCA.

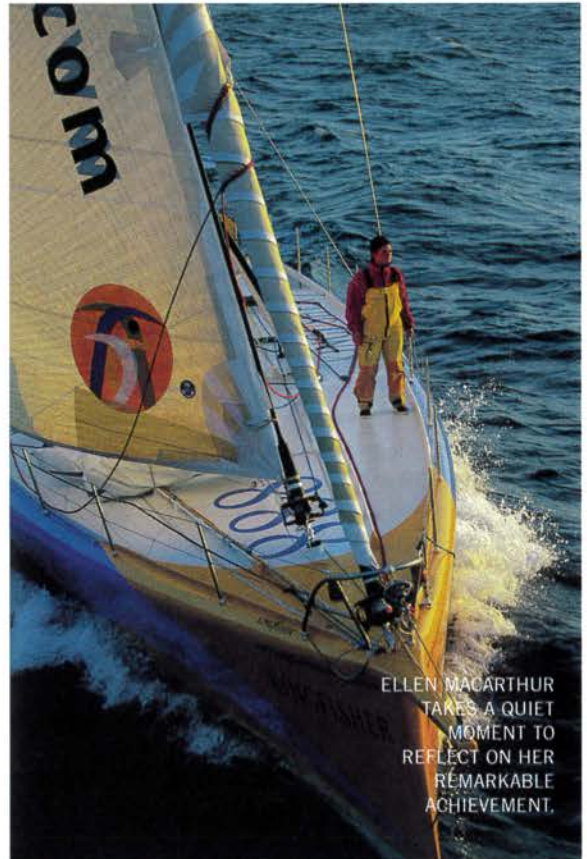
However, Brindabella, knocked off her perch by 30 minutes after three consecutive line honours, headed for Port Kembla and, after an overnight stay, led the fleet back to Sydney on the Sunday in what owner/skipper Snow described as "champagne sailing."

The race to Wollongong was Shockwave's final overnight race in Australian waters. It was an impressive finale with Shockwave taking line honours and also the triple

handicap honours in the Bluewater Championship Series, winning the IMS, IRC and PHS divisions on corrected time.

In the return race on the Sunday, line honours went to Brindabella, with Bob Robertson's Sydney 60 Eureka winning the Bluewater Championship IMS division from Brindabella and the Middle Harbour Yacht Club Beneteau 40.7 Honeysuckle, skippered by Ray Harris.

In the Ocean Pointscore series, Dick



ELLEN MACARTHUR TAKES A QUIET MOMENT TO REFLECT ON HER REMARKABLE ACHIEVEMENT.

REMARKABLE SOLO EFFORTS IN VENDEE GLOBE

The Vendee Globe, arguably the most demanding, dangerous and often controversial solo non-stop circumnavigation race, ended in mid February with two remarkable achievements, by Frenchman Michel "Le Professeur" Desjoyeaux and young Englishwoman Ellen MacArthur. In finishing first and second, they became the first sailors to circumnavigate the world in under 100 days.

Desjoyeaux, sailing the Finot design PRB, crossed the finish line in the bay of Les Sables d'Olonne on the French

Atlantic coast to complete the Vendee Globe in 93 days, 3 hours, 457 minutes and 32 seconds, pulverising the record established in 1996-97 by Christophe Augin. In slashing 12 days and 16 hours off the record, the French sailor raced the 23,896 nautical miles at an average speed of 10.69 knots.

Just over a day later, the 24 year old English woman sailed her Kingfisher across the line to become the first woman to achieve a solo circumnavigation in less than 100 days. She is also the youngest skipper in this Vendee Globe.

She spent 94 days, 4 hours, 25 minutes at 40 seconds at sea, battling problems over the past two weeks, which included a damaged rudder, a broken daggerboard and problems with her forestay.

Of the 24 boats that started from Les Sables d'Olonne on November 9, 2000, there were still 14 still at sea when the first two yachts finished. One solo sailor was still struggling with his 50-footer, Wind, still toughing it through a stormy Southern Ocean, some 800 nautical miles from Cape Town.

- Peter Campbell

Cawse had an outstanding weekend with his Cawse/Lyons design Vanguard, winning both the IMS and IRC divisions of the races to and from Wollongong with the Cookson 12 Occasional Coarse Language (Warwick Sherman) runner-up up in both races.

- Peter Campbell

TREBLE FOR DOCTOR WHO IN HISTORIC BRUNY ISLAND RACE

Veteran Tasmanian yachtsman Roger Jackman has made a clean sweep of the Royal Yacht Club of Tasmania's historic 90 nautical mile Bruny Island Race with his Laurie Davidson-designed 52-footer, Doctor Who, taking line honours and winning both the IMS and PHS handicap divisions on corrected time.

Doctor Who completed the circumnavigation and sail up the River Derwent to the finish off Hobart's Castray Esplanade in 11 hours 47 minutes 48 seconds, about 33 minutes ahead of Tony Lyall's Elliott 13 Valheru.

On corrected times, Doctor Who won the IMS division from the Sydney 41 B52 (Hughie Lewis) and the Lyons 12m Interum (Craig King) and won the PHS division from B52 and Valheru.

The fleet sailed in a 15 knot westerly until nearing The Friars, off the south-west tip of Bruny Island where they encountered an awkward, lumpy sea kicked up by a 30 knot sou'wester. The win has placed Doctor Who in a strong position to win the RYCT's Britannia Cup offshore pointscore trophy.

- Peter Campbell

TOP FLEET FOR SAN FERNANDO RACE

The 480 nm San Fernando Race, Hong Kong's leading offshore event, looks like attracting entries from Asia, Australia and Europe. A French crew are currently in charter negotiations with a Hong Kong owner and it looks likely they will join anticipated 40 other competitors on the line.

Frank Pong's maxi-sled Jelik is an early entrant as is new boat Rhythm Stick, an X-442 owned by Robert Knight who last time competed on his other yacht Bear Necessity. Andy Soriano's Swan 80 Malagaya and Ray Ordovesa's well campaigned Karakoa are also intended entrants as well as Neil Pryde on the Sydney 46 Hi Fidelity.

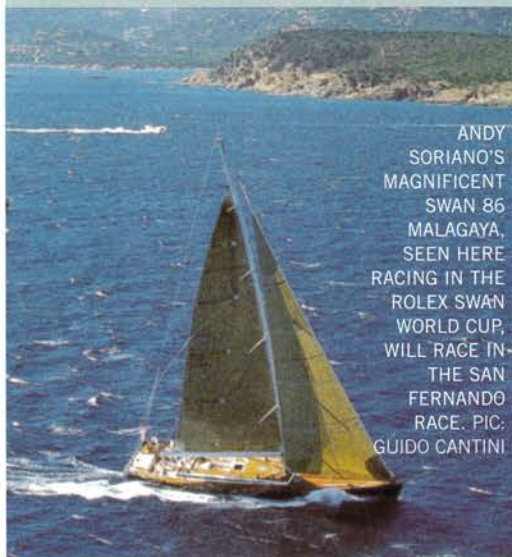
The race starts in Hong Kong's Junk Bay on Thursday 12th April 2001. With the Times-Clipper fleet arriving a couple of weeks before the start, the parties look set to start early! The Club has its own website (www.sanfernandorace.com) dedicated to the race which keeps competitors well informed on what's happening:

For further information contact Kelly Gilkison, Sailing Manager, RHKYC

Tel: (852) 2239 032

Fax: (852) 2239 0364

e-mail: kgilkison@rhkyc.org.hk



ANDY SORIANO'S MAGNIFICENT SWAN 86 MALAGAYA, SEEN HERE RACING IN THE ROLEX SWAN WORLD CUP, WILL RACE IN THE SAN FERNANDO RACE. PIC: GUIDO CANTINI

SOUTHERN STAR WINS FARR 40 CHAMPIONSHIP

After seven heats across four days of tight racing, John Calvert-Jones' Southern Star won the Victorian Farr 40 Championship,

part of the 2001 Sail Melbourne International Regatta.

Southern Star, the pre-championship favorite, went into the final race today with the Victorian title still wide open. A second

NEVILLE WITTEY'S HAT-TRICK IN ETHELLS STATE CHAMPIONSHIP

Olympic yachtsman Neville Wittey has won his third successive New South Wales State championship in the International Etchells keelboat class on Lake Macquarie.

Wittey went into the final race equal on points with local sailor Peter McNeill.

Neither Wittey or McNeill could afford another poor race in the seven heat series, so the final race became a question of each going "going for broke" to achieve the best possible place.

Wittey, steering Yandoo XX, went out into the 20-25 knot sou'wester with the clear advantage of having big David Giles in the bow. Yandoo XX got the gun while McNeill, at the helm of Tom

Pepper XVIII, finished third in a closely contested race, giving Yandoo XX a final two point winning margin.

Overall, Wittey finished with 26 points, McNeill 28, third overall going to Pittwater sailor Mark Richards steering Steam Packet (34 points) followed by Melbourne skipper Ian Johnson on 42 points with Bananas in Pyjamas.

Conducted by Lake Macquarie Yacht Club, it was an excellent series with winds ranging from a 14 knot E/NE on the first day, 15-20 knot SE on day two and a brisk 20-25 knot Southerly on the final day. There was not one protest during the series!

FINAL PLACINGS:

- 1. Yandoo XX** (Neville Wittey, Sydney fleet) 1-9-4-9-19-2-1, 26 points.
- 2. Tom Pepper XVIII** (Peter McNeill, Lake Macquarie) 18-3-3-12-4-3-3, 28 points.
- 3. Steam Packet** (Mark Richards, Pittwater) 2-1-6-1-17-27-7, 34 points.
- 4. Bananas in Pyjamas** (Ian Johnson, Melbourne) 4-13-9-10-2-4-20, 42 points.
- 5. Alchemy** (Greg Cassidy) 9-7-2-4-20-15-12, 49 points.
- 6. Bald Eagle** (John Dunn, Sydney) 22-15-15-2-6-7-8, 54 points.

placing was enough to secure the title, leaving the reigning world champion on top of the championship table with 11 points.

Marcus Blackmore's Emotional Hooligan was in second place with 15 points and Richard Perini's Corinthian Doors third, a further three points behind. Brighton Star, with David Goetz at the helm, finished the series with two consecutive victories but still back in fourth place overall on 20 points.

The Championship fleet experienced varying conditions across the four days, with strong winds, choppy seas and high temperatures prevailing for the last race. It was consistent sailing rather than domination that won the title for Calvert-Jones and his Southern Star crew. On Thursday they won the opening heat and finished third in the other. Friday saw another two second placings before a victory and an sixth placing on Saturday, leading into today's second placing.

Calvert-Jones had a brilliant crew together for the Victorian title. Onboard were Colin Beashel, Whitbread Round the World yachtsman, Ian "Barney" Walker, and former Etchell World Champion, Andrew Palfrey. While Emotional Hooligan, Corinthian Doors and Brighton Star all had the better of Southern Star at some stage, none could match it over the seven race series.

FINAL PLACINGS:

Victorian Farr 40 Championship – Royal Yacht Club of Victoria

- Southern Star
John Calvert-Jones 11 points
- Emotional Hooligan
Marcus Blackmore 15 points
- Corinthian Doors
Richard Perini 18 points
- Brighton Star
David Goetz 20 points
- Leyroy Brown
Warren Wieckman 26 points
- War games
David Urry 28 points
- Farr too Much Fun
Phil Coombs 35 points

bar talk

(a collection of hearsay, rumours and gossip)

THE THING THAT'S REALLY CAUSING MANY "HEAVIES" TO TURN GREEN AT THE

moment is the money being thrown at Aussies involved in America's Cup campaigns. James Spithill has joined the Seattle-based OneWorld challenge (lead by Peter Gilmour) for an annual figure in multiples of six figures U.S. His trimmer, Joey Newton, has moved with him for a figure in the low six figures. The elegant and debonaire David "Rattie" Blanchfield is sailing for Italian high fashion house Prada.

It used to be that owners were rich guys and crew were ragged-arsed boat bums. Now it seems it might be the other way around.

THE VOLVO OCEAN RACE is also causing an exodus of pro sailors. Albie Pratt is sailing with NewsCorp, Peter "Spike" Dorien is with Dj Juice Dragons alongside Peter "Billy" Merrington and Finn sailors Anthony "Nokka" Nossiter (both on helm and trim), and Tom Braidwood is on the foredeck of Team SEB. The guys who tried out for Volvo teams but weren't selected include.....



XENA IS AIMING FOR THE WORLD 24 HOUR MONOHULL SPEED RECORD (PIC – IAN MAINSBRIDGE)

SEAN LANGMAN is attempting the monohull 24 hours speed record. The plan is that his Open 60, now sponsored by Grundig for the next three years, will stay in Brisbane after the Gladstone race, ready to rip whenever meteorologist Clouds Badham gives the word. Langman says that the boat only needs flat water and a constant 25 knots of breeze to take apart the current record of 469 miles.

After the record attempt, Langman will whack a bigger rig and 10 or 12 feet on the stern of Xena/Grundig for the next Sydney to Hobart. Langman is also talking about a "street kid's" low-budget America's Cup challenge.

WHAT A SHOCK – a large silver boat, which was "definitely not for sale until after the European season is over" was recently taken to Noakes to be painted green and having the name Morning Glory emblazoned on the side before being shipped overseas.

IT'S A TOUGH LIFE when your biggest decision is what rule your new maxi should be built to, but that's the tough question currently being asked by the owners of a couple of local maxis. Bar Talk won't mention who they are but put it this way, neither of them made it to Hobart this year.

NEW ZEALAND'S STEWART THWAITES (owner of Starlight Express) is facing the same problem. He's getting a new maxi designed by Brett Bakewell-White- but which rule it's going to be a "maxi" under is the big question.

ROD SKELLETT'S national Super 30 champion Wild Bull is on the market. It's going to be replaced by another Greg Young design built by Mal Hart and carrying Doyle Fraser sails, but aimed at taking out the 9.5m record in the next Hobart race.

LINE 7'S NEW FLAGSHIP STORE

Line 7 has opened its first Flagship store in the Sydney CBD. The outlet, located in Pitt Street Mall in Sydney Central Plaza, is unique in that it is a focal point for the latest information on major international sailing events.

Not only does the instore mega TV screen show the latest

in sailing videos but it is also linked to websites so that the yachting thirsty for the latest results can visit sites such as the Volvo Ocean Race and the America's Cup.

The store is the first of five to be opened in Australia in the next two years.



REVOLUTIONARY NEW ROWLOCKS

The scientifically designed angular shape of the innovative GACO gated rowlock holds an oar in the ideal position for an effective rowing stroke. Conventional rowlocks develop friction and wear because of the uneven pressure where the pin rotates in the socket, resulting in an oval hole that causes the rowlock pin to slop back and forth, causing even more wear. The key to the GACO's even stroke movement lies in its elimination of the rowlock pin rotation in the socket.

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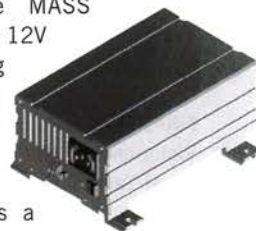


POWER IN YOUR LUNCHBOX

Mastervolt Australia have released the newest and smallest in their range of pure sin wave MASS inverters. Available in 12V or 24V and weighing only 2.7kg, this easily-mounted unit is perfect for many marine applications.

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ALBY BURGIN HANGS UP HIS SEA BOOTS. That "Old Salt" of Australian ocean racing, Alby Burgin, has finally hung up his sea boots - at the age of 85! Not giving up sailing, of course, but ocean sailing.

After 75 years of sailing and logging 500,000 sea miles, Alby called me from Belmont on Lake Macquarie a couple of weeks ago to announce his retirement and to thank Offshore and myself for the articles I had written and published about his remarkable exploits at sea. And remarkable they have been!

"I've done 31 Sydney to Hobart Races and that's enough," explained the veteran

Most of those races were fully crewed, but for the past 15 years Alby's love has been short-handed sailing with Alstar, the Adams/Radford 52-footer he built in 1985 and launched on his 70th birthday. Alstar opened up a new career in ocean sailing for Alby, winning the solo and double-handed races across the Tasman Sea and in 1988 winning the 7000 nautical mile Bicentennial Two-Handed Around Australia Race.

The year before he had sailed Alstar in the inaugural Melbourne to Osaka Two-Handed Race against a fleet of 97 boats, being the first Australian and first foreign yacht to finish the 5,000 nautical mile

the year.

The 1999 Telstra Sydney to Hobart, last ocean yacht race of the 20th century was a fitting finale for Alby, with Alstar the first Lake Macquarie yacht to finish, the first 50-footer in the PHS class and fourth in PHS Division A. Earlier in the year he had battled through yet another cyclone to finish the two-handed division of the 1999 Coffs Harbour to Suva Race, winning the Tabu Soro Trophy - which means a True Warrior. It was an effort than earned him the 1999 Ocean Racing Veteran of the Year Award.

Alby Burgin, at the fine old age of 85 is adamant that he has given up ocean

The lure of the sea quickly took hold of Alby, leading to half a century of ocean racing that has seen him compete in 31 Sydney to Hobart races..

sailor whose final Hobart was in 1999, skippering his fast cruising boat, Alstar, into fourth place in the PHS division. Back in 1961 he had skippered his then yacht Rival to an overall handicap win in the ocean classic.

It was with the same yacht that he survived Cyclone Emily in the 1973 Brisbane to Gladstone Race, Rival being rolled 360 degrees and Alby thrown into the sea, fortunately surfacing beside the dismasted sloop.

Lake Macquarie, just south of Newcastle has been Alby's stamping ground since he was a boy. He was born at Boolaroo in 1915 and built his first boat from sheets of galvanised iron as a nine-year-old. A year later he joined the Scouts and became involved in sailing on the Lake.

As a 15-year-old he began sailing a VJ with Toronto Sailing Club, winning a NSW championship, but War service interrupted his sailing until he joined Lake Macquarie Yacht Club in 1946 and began crewing on keelboats on the Lake and in coastal races.

The lure of the sea quickly took hold of Alby, leading to half a century of ocean racing that has seen him compete in 31 Sydney to Hobart races, 33 Montague Island races, eight to Lord Howe Island, seven Sydney to Mooloolaba, six Brisbane to Gladstone and five Australia to New Caledonia races, plus races and cruises to the Solomon Islands, Suva, Tahiti, New Zealand and Japan.

race to Japan. In 1994 he again raced Alstar to Osaka, finishing seventh out of 55 starters, returning to Australia to contest the 50th Sydney to Hobart later in

racing, but I'm sure we will still see him sailing Alstar around Lake Macquarie for years to come. *Offshore Yachting* wishes him well. ❖

ALBY BURGIN (RIGHT) ENJOYS A CELEBRATORY DRINK WITH ANOTHER VETERAN YACHTSMAN, JOHN BENNETTO FROM HOBART, AFTER BEING PRESENTED WITH THE 1999 OCEAN RACING VETERAN OF THE YEAR AWARD. PIC: PETER CAMPBELL





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calendar

CYCA OFFSHORE RACING CALENDAR

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APRIL	7	Sydney - Mooloolaba Race, CYCA
	13	53rd Brisbane to Gladstone Race, QCYC, Brisbane
	13	Melbourne to Port Fairy Race, ORCV, Melbourne

MAY	23-25	BEA AYF Annual Conference, Gold Coast
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JUNE	2-9	IMS Europeans, Punta Ala
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JULY	2	Sail Solomons 2001 Brisbane - Gizo Race
	2-8	Rolex World IMS Championships, Valencia, Spain
	9-13	Sydney 40 Worlds, Cowes, UK
	16-28	Admiral's Cup, Cowes, UK
	27	Sydney - Gold Coast Race, CYCA

AUG	4	Hogs Breath Mooloolaba - Airlie Beach Race
	5-12	IMS 50 Worlds, Palma, Spain
	12	Fastnet Race, Cowes, UK
	11-18	Hogs Breath Race Week, Airlie Beach, Qld
	11-16	Hayman Big Boat Series
	18-25	Australian Offshore Championships, Hamilton Island Race Week, Hamilton Island, HIYC
	18-25	America's Cup 150th Jubilee, Royal Yacht Squadron, Cowes
	24-2	Int Etchells World Championship, Royal Lymington YC, Solent

SEPT	2-9	Maxi Yacht Rolex Cup, Porto Cervo, Sardinia
	12-15	Farr 40 Worlds, Cowes
	23	Volvo Ocean Race Leg 1, Southampton - Cape Town

OCT	1-6	Mumm 30 Worlds, Sardinia
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NOV	11	Volvo Ocean Race Leg 2, Cape Town - Sydney
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DEC	1	ETA Volvo Ocean Race fleet, Sydney
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2001

Position	Race
1	OVERALL SINGAPORE STRAITS REGATTA
1	STRATHFIELD PITTWATER - COFFS HARBOUR OCEAN RACING SERIES.
1	OVERALL PITTWATER - COFFS HARBOUR RACE (IMS)

2000

1	LINE HONOURS SYDNEY- HOBART YACHT RACE
1	OVERALL SYDNEY-HOBART YACHT RACE (IRC)
2	OVERALL SYDNEY- HOBART YACHT RACE (IMS)
1	CLASS B SYDNEY- HOBART YACHT RACE
1	TELSTRA CUP (IMS)
2	MUMM 30 WORLD CHAMPIONSHIPS
2,3,4,5	I.M.S HAMILTON ISLAND RACE WEEK
1,3	P.H.S. HAMILTON ISLAND RACE WEEK
1	EUROPEAN MUMM 30 CHAMPIONSHIPS
1	AUSTRALIAN JOG CHAMPIONSHIPS
1	AUSTRALIAN SUPER 30 CHAMPS.
1	SYDNEY- COFFS HARBOUR
1	ADELAIDE TO PORT LINCOLN RACE
2	AUSTRALIAN IRC CHAMPIONSHIPS
1	PORT LINCOLN RACE WEEK
2	CLASS 1 GUTLAND RUUT (SWEDEN)
1	IMS CLASS A TOBA RACE (JAPAN)
1	C/R CLASS A TOBA RACE
1	C/R CLASS C TOBA RACE

Swedish yacht Nicorette powers across Bass Strait using D4 Offshore main and D4 Code 2 headsail.

Sailors are drawn to the Sydney - Hobart Race for many reasons. After being forced to retire in 1997, Ludde Ingvall knew he had unfinished business in Bass Strait. For an assault on the 2000 race, Ludde and his crew came prepared with a new yacht, equipped with Doyle Sails. The principle working sails were D4 sails made by the Australian Doyle-Fraser loft.

The choice of the Australian developed D4 sails was rewarded when Nicorette swept the opposition aside, winning line honours by over three hours and finishing first overall on corrected time (IRC).

The durability and performance of D4 sails was further reinforced when Ed Psaltis and Bob Thomas' AFR Midnight Rambler clinched victory in IMS class B. Midnight Rambler used Doyle - Fraser sails, including the same D4 mainsail that not only survived the storm swept '98 race but won the race so convincingly.

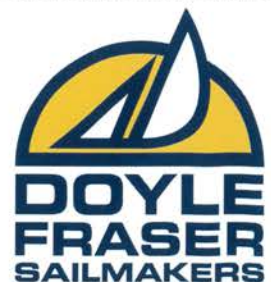
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imx40 Since it's launch in March 2001 the IMX 40 has proven itself in both IRC and IMS competition. Nips and Tucks, the first IMX-40 to reach Australia won Telstra Cup, Strathfield Sydney to Coffs Harbour race and Pittwater & Coffs Harbour Offshore series on IMS. The consensus is that had she entered IRC her speed around the track would most likely have given her first in Telstra Cup, 2nd to Heaven Can Wait in the Pittwater to Coffs Harbour race and first in Pittwater and Coffs Harbour series. With over 90 of these yachts sold worldwide in only 10 months there is great potential for International class racing.

B R A N D N E W

imx45 Building on the success of the IMX 40, the first IMX 45 will be launched for the Paris Boat Show in December- the design philosophy is exactly the same. Final keel and rudder design will be optimised to results of ORC meeting next November.



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