



Oh dear...

The keel fell off the second of Oracle Racing's old (1999) AmericaOne IACC designs 12 months, almost to the day, after the keel fell off its stablemate. Ironically, the second keel to fail was actually off the older of the two boats AmericaOne built - though this may simply reflect relative use of the two boats. Both designs employed a keel fin terminated at the hull, rather than the through-deck fins of early IACC designs. While the through-deck structure is superior in terms of strength, it is now regarded as inferior because of the additional deflection generated through the greater fin span (taking in the hull to deck dimension). Interesting, that in model yacht design (see pg. 38) through-deck installation remains almost universal. For Oracle Racing, the America's Cup Protocol meant their team's designers were unable to inspect the engineering drawings for the keel that failed 12 months ago. Given that such a composite structure becomes near 'invisible' to outside inspection once complete, there was little Oracle's engineers could do to prevent the risk of a similar failure to their second boat. Thus, when the second keel failed, the crew's only consolation was that they were marginally better prepared. The way the Cup Protocol works actually counts most heavily against any prospective lower budget (sic) teams, that will need to learn the maximum possible from any old boats they buy. The other more obvious issue is one of safety. Had somebody died during Oracle's latest misadventure, it is hard to imagine how those who support the total ban on technology transfer could maintain a case. Or where they would have gone to hide. That said, why did both keels fail? 'Lifting' components can hardly yet be applied to keels as it reasonably can to rigs? Can it?

Cover: Ivor Wilkins
Inset: Graham Bantock

VOLVO OCEAN RACE 2001

32 Encore le carrousel

Cape Town was the setting for Volvo 2001/02's opening round of personnel 'alterations' and technical protests. Plus a look at a tough opening week on the race's second leg to Sydney. **TIM JEFFERY**

33 'Tricky, really tricky'

TYCO navigator **STEVE HAYLES** explains why Leg 1 was principally a triumph for rapid reaction rather than forward planning

36 The big Kahuna

MICHAEL ILLBRUCK took on the expanding sailing and commercial activities of his father, Willi Illbruck, with gusto, going on to run a fast-growing multinational conglomerate, plus twin Volvo Race and America's Cup challenges

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30 Busy fella...

ROB MUNDLE checks in with **IAIN MURRAY**, to be reassured that the former champion designer and sailor of 18-footers is far from bored in the absence of another America's Cup

38 Slipping ahead

A look at the history of yacht design shows that many new developments at full scale were preceded by similar design innovation in the world of model yacht racing. Former world champion **GRAHAM BANTOCK** reviews current trends

43 Flowing Part II - Big Daddy

In the second part of our examination of design technologies, aerodynamicist **PETER BRYANT** looks in more detail at today's most widely used tool, Computational Fluid Dynamics or CFD

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Hasso Plattner interviewed, Dee Smith and Ian Moore's Volvo Race diaries, Transpac speed limits under review and the Volvo Ocean Race organisation keeps a close eye on world events

14 World news

Cammas takes the Jacques Vabre, VDH passes the Horn, Le Défi find their sponsor, Bestaven dominant in Mini Transat, as Chris Sayer plans his bid for 2003, NZL-40 goes offshore - and wins, Sydney-Hobart rescued and US yachtsmen play their part. **IVOR WILKINS, PATRICE CARPENTIER, DOBBS DAVIS, ROB MUNDLE**

23 Paul Cayard

The winner of the last Whitbread Race thinks more rather than less should be read into the first-leg results of the current Volvo Ocean Race

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Apparent Wind Sailing - **FRANK BETHWAITE** distills matter down to the Critical Ratios

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Who *will* be driving the Oracle in Auckland?

46 Design - Time bandit

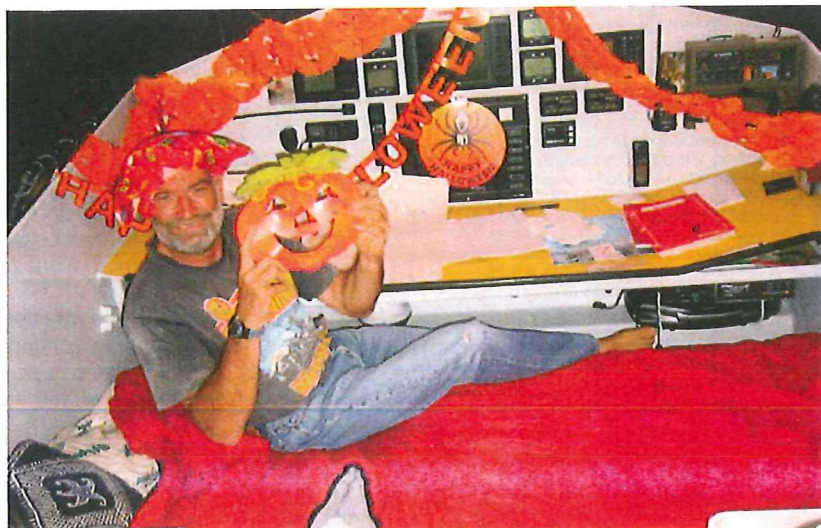
MAURIZIO COSSUTTI's Open 65 *Cometa*

48 Seahorse raceboat build table

50 RORC news

65 Seahorse calendar

Freddy Loof is the *Seahorse Sailor of the Month*



Maybe composites weren't so bad; Jean Luc Van Den Heede celebrates Halloween on his aluminium-built Vaton 85 footer, *Adrien*, as he approaches Cape Horn on his east-west round the world attempt. Ten days later, and after a successful rounding of the Horn, VDH had to turn back when *Adrien's* keel structure began to work loose following a weld failure



Sir Peter Blake

The passing of Peter Blake brought an end to the first part of a magnificent era for New Zealand sailing. It is now largely taken for granted that a winning international crew is likely to have its quota of Kiwis. But remember that it was Blake's Whitbread win with *Steinlager 2* in 1989/90, on top of New Zealand's Admiral's Cup win of 1987, that consolidated his little country's arrival on the international stage. Since then few sailing honours have eluded the men in black, but it was Blake himself who took his country to the next pinnacle in winning the America's Cup in 1995. And that all-conquering campaign, which simply rolled over its rivals in San Diego, was not simply a follow-on to the previous efforts of Sir Michael Fay's team of 1992. Far from it, Blake had stepped in during 1993, using his own (borrowed) money to keep a New Zealand challenge afloat, before going on to completely rebuild a home-grown campaign in his own image. And there were no personality-driven distractions from the task of winning. No time wasted while the 'boss' was persuaded not to drive the boat, nor the typical internal games of personnel selection. Blakey wanted Coutts to lead the boat - he'd watched him in 1992 and before that in his Finn, and had reached the conclusion that this was the man for the job. 'The most personally determined man I have ever met', Blake said of his skipper. Peter Blake was a man who derived his satisfaction from getting the whole job done. His ego needed no artificial aggrandisement. He loved the sea like few others. But his leadership skills and his eye for personnel selection, and his courage to then run unreservedly with the decisions he had made were inspiring.

Cover: Carlo Borlenghi/Sea and See

VOLVO OCEAN RACE 2001/02

38 Pause for thought

As the fleet returns to the Southern Ocean, via Hobart, rivals know that if *illbruck's* charge is to be stopped, it has to happen soon. **TIM JEFFERY**

40 Leg 2 diary

A look at the highs and lows of the second leg

42 Routeing analysis

An examination of the routeing strategies the fleet adopted, and a comparison of how they scored against the ideal. **DAVID BRAYSHAW**

43 Still on top of their game

RUSSELL BOWLER and **STEPHEN MORRIS** of Farr Yacht Design talk about how VO60 design and engineering have progressed since the last race, and assess how their designs are faring against their first real competition in a while

FEATURES

36 Making a difference

IVOR WILKINS remembers Sir Peter Blake - a giant of the oceans in practically every respect

47 86 and counting

ROB MUNDLE visits the Mona Vale factory of Australian composites expert John McConaghy, whose 1988 maxi *Windward Passage 2* 'displaced' a few noses, including several at NASA...

51 On a roll

First it was 3DL, then no sooner has all the noise over patent actions faded than North are presenting a new mechanical sailmaking process, this time one that is oriented towards bringing moulded sails to small boats. **DOBBS DAVIS**

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Volvo go American and see off the threat of disruption, Race Diaries, Frank Bethwaite's new 59er (more next month), Nigel Irens goes 50, *Windjet* breaks 100mph - and looks to the water. Plus ISAF starts to make its presence felt offshore

14 World news

Auckland comes to a halt to remember Sir Peter Blake, Davis defends his 'national' title, Ellen is the FICO champion, Kandler launches 2006 Challenge, Peyron (Bruno) goes back to sea, Tour Voile celebrates a big birthday, Hobart fleet continues to dwindle (but not in stature), while a near-record Key West entry confounds sceptics. **IVOR WILKINS, PATRICE CARPENTIER, DOBBS DAVIS, ROB MUNDLE**

22 Rod Davis

The Prada sailing director ruffles feathers with his pre-event tally for his America's Cup rivals

25 Olympic and small boat news

FRANK BETHWAITE wraps up his current series with a look at methods of performance equalisation, and at where to head in the future...

28 Seahorse Letters

Some kind words from Brazil

31 ORC - David Lyons

Skirmishing in Lisbon and farewell to 'fun-booms'

33 America's Cup News

Le Défi breathes easier, plus a subdued Auckland watches the first new IACC launchings

54 Design - Small boat, big task

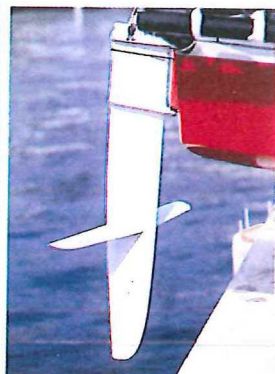
MARK LOMBARD won the contract to draw the new Figaro Bénéteau 2003. Then the fun began

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Philippe Facque is *Seahorse Sailor of the Month*



STEVE ARKLEY

Zach Berkowitz and Trevor Baylis from San Francisco won a windy 2001 International 14 World Championship in Bermuda, at the end of November, on their modified Paul Bieker design. However, as much attention was focused on the continuing invasion of the class of rudder-foils, now variable in many cases, and used by the top three boats overall. We will have a full technical report next month



Full flight

Readers of *Seahorse* will be aware that the Australian International Moth fleet has been active in the promotion and development of foils to improve racing dinghy performance. Now the mantle has been taken up in earnest by the International 14 fleet, in particular, which as much as three years ago was enjoying some success in using horizontal lifting foils on rudders, to reduce pitching upwind and fool the water into believing these short but powerful boats were longer than 14 feet. While 14 sailors around the world have been tweaking and finessing rudder foils, some of Australia's 14 fleet have gone to the next step, putting foils on both the rudder blade and daggerboard. The boat pictured is actually flying rather than wave-jumping - note the relatively flat water. Foil development in popular classes such as the Moths and the 14s is especially valuable, since direct comparisons with known good performers are easily available. How fast such development is allowed to progress will probably depend largely on the classes themselves, since rules limiting or prohibiting foils are already under consideration. Inevitably a good foiler will have a different hull shape to a non-foil boat, so development will have a big price in obsolescence. However it appears that modern materials have allowed us to move right to the brink of another big step forward in sailing performance. We should not stop progress too lightly. Remarkably, top International 14 designer, Paul Bieker, believes that foils could hold great benefits for monohulls, even relatively heavy displacement America's Cup boats, where class rules do not prohibit them. Like wing-keels in the late 80s, this could be a development that starts off very localised, only one day to end up on production designs

Cover: Rod Vaughan
Inset: Guy Gurney/DPPI

VOLVO OCEAN RACE 2001/02

36 More of a boat race

No-one expects *illbruck's* fall from grace on Leg 3 to be anything but temporary. But it has certainly made things more interesting. TIM JEFFERY reports

38 Leg 3 diary

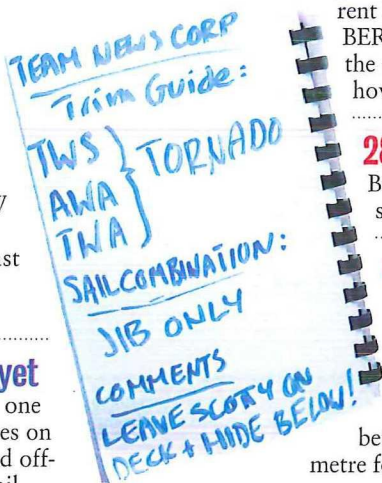
A look at the key events of Leg 3

42 Routeing analysis

DAVID BRAYSHAW looks at the detail behind some of the last leg's key tactical moments (see right)

42 It's not over yet

ROSS HALCROW is one of the best known faces on the America's Cup and offshore circuits. Now sail-coordinator for the *illbruck* Challenge and trimmer on their Volvo 60, he feels well-prepared going into Leg 4



FEATURES

31 Where now boss?

In the second part of our discussion with Farr Yacht Design, we talk to STEVE MORRIS about working with Oracle Racing and with JIM SCHMICKERS on some future options for improving international offshore racing

34 Slipping ahead - Part 2

World Champion model yacht racer GRAHAM BANTOCK looks in more detail at what makes for a successful One Metre design

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A look at the all-new 2003 Admiral's Cup, positive developments for IRM at Ford Cork Week, BOB ROSS tells the story behind Frank Bethwaite's 59er and new ideas for skateboarders...

16 World news

Twister nearly wins the Sydney-Hobart Race, Davidson design scoops (vintage) Skiff regatta in Sydney, le Défi cash the cheque, JMV's cup runneth over, Rothschilds shake up the trimaran circuit, Auckland debates the next Volvo Race and a promising second year ahead for the Transpac 52 Box-Rule. IVOR WILKINS, PATRICE CARPENTIER, DOBBS DAVIS, ROB MUNDLE

23 Paul Cayard

It's off to the Vovo Race once again for the 1997/98 race winner. Easy decision really...

25 Olympic and small boat news

Foils - can they be stopped? ANDY RICE talks to top small boat designer PAUL BIEKER, plus current International 14 World Champions ZAK BERKOWITZ and TREVOR BAYLIS about the dinghy world's foil invasion and about how and when they prove effective

28 America's Cup News

Ben Ainslie leaves OneWorld and Oracle stirs up the afterguard mix a little more

44 Design - Big fun

Australian engineer MARK PIVAC is one of the original innovators of foils as applied to small sailboats. Having proved their worth on a series of International Moths, he is trying to go one better as he prepares to launch his new 12 metre foiler *Spitfire*

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And IRM is quietly but steadily gaining ground

65 Seahorse Sailor of the Month

Franck got it! Next time John?

66 Seahorse race calendar



MARTIN-RAGET/KPS

Bruno Peyron sets out this month on his new attempt on the Jules Verne record. Part of the cost to Peyron of successfully getting *The Race* up and running has been to do little sailing himself. The man who was the first to break the 80 day barrier, on his heroic voyage on *Commodore Explorer*, will now put matters right. Peyron is truly a master of big cat sailing - a read of Cam Lewis' punchy book on the *Explorer* trip is to be recommended



Slipping away

The results of Leg 4 of the Volvo Race were so extraordinary that illbruck must have been left thinking they had won the lottery twice on the same day. As illbruck's co-navigator Ian Moore explains (see *Update*) things could not have worked out better for the German-based team, their rivals finishing in almost exactly the reverse of the order in which they had been lying overall going into the leg. Hence illbruck moves seven points away from the rest of the fleet, which in turn has closed into a bunch that will inevitably become distracted with racing among themselves. Still the most consistent threat to illbruck is Grant Dalton's *Amer Sports One*. Dalton may not have the fastest boat, but it is fast enough. And Dal's crew is second to none - especially in the area of helmsmen (actually, why any big-budget teams started what was always going to be a tight contest with a less than plentiful supply of world-class helmsmen is a mystery). Dalton is under pressure to make a big jump on illbruck in the next couple of legs, to close the fight down before the 'inshore' stages at the end. Others are also under pressure to at the very least bang in a stage win, so there is every chance of seeing a new name on the top step of the podium in Miami. Kostecki is the consummate series sailor, not a man who needs to win by a lot - just to win. Hence a big margin at the event's halfway stage, the equivalent of over one point per leg from Rio to the finish, is a huge bonus. Over a long series the best-prepared entrant usually draws ahead, and no race is longer than this one. For those who want to see a close finish (and that's just about everybody except the illbruck team!) the next leg is likely to be the most important of the whole race.

Cover:
Daniel Forster/illbruck
Inset:
New Zealand Herald

VOLVO OCEAN RACE 2001/02

36 illbruck threaten a race for second...

After a glimmer of hope at the end of Leg 3, Kostecki's illbruck crew left their rivals in no doubt who was back in charge as the fleet reached Rio. TIM JEFFERY reports

39 Leg 4 diary

A review of the most ice-strewn - and probably dangerous - leg that this race has seen for many years

40 Routeing analysis

Or two dimensions seems easier than three. DAVID BRAYSHAW

41 Report time

Two-thirds of the race distance gone along with nearly half the available points. ANDREW HURST takes stock

FEATURES

33 The \$64million question

Not since the Volvo (then Whitbread) Race first introduced the Volvo 60 class has there been so much speculation over the shape of the subsequent event, or indeed of the likelihood of it happening at all. One man knows (nearly) all the answers - ANDREW HURST talks to Volvo Race chief executive HELGE ALTEN

42 Another day at the office - Not!

KLAUS-JÜRGEN HEER explains what you do when someone asks you to build Juan Kouyoumdjian's outrageous new 35m, pencil-slim, water-ballasted and be-winged monohull

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Volvo Diaries take on an icy look this month, a report from the first week's trials of Mark Pivac's

new 12 metre foiler, *Spitfire*. Plus IACC racing reaches San Francisco Bay ahead of the Cup...

14 World news

Team New Zealand continue to set the pace at the IACC International Regatta in Auckland, while the scandal-clouds gather over Syndicate Row, De Kersauson leads the Jules Verne Challengers away after all, and reaction to the new Admiral's Cup format. Plus Peter Craig pulls off the biggest success at this year's Terra Nova Trading Key West Raceweek. IVOR WILKINS, PATRICE CARPENTIER, DOBBS DAVIS, ROB MUNDLE

22 Rod Davis

The hardest task in an America's Cup campaign? 'Skippering the B-Team'

24 ORC column

Alignment is in sight at last as the ORC puts its weight behind the newly formed IMS 600 class, one of the two classes that will compete at Admiral's Cup 2003. DAVID LYONS reports

27 Olympic and small boat news

The Star class recently approved a major step forward in the drive to attract an even wider international spread of competition. And also, perhaps, to help some of its members to live a little better...

29 America's Cup news

Scandals, centreboards, chasing the Deutschmarks, two new boats for Dennis, Chris Dickson back in the news - it must be Cup time again. Plus an interview with GBR Challenge design co-ordinator DEREK CLARK

46 Design - Bang for the buck!

On paper, at least, the new Simonis Voogd Max Fun 35 appears to offer exactly this in prodigious quantities. MAARTEN VOOGD explains

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Roxley Commodores' Cup gathers momentum

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Vive la France - encore!

66 Seahorse race calendar



CHRIS CAMERON

Similar - there's a surprise. Limits on technology transfer or not, the brilliance of Team NZ's NZL-60 design could not be hidden once the Cup started in 2000. There will be many other clones appearing in the coming months, however Mani Frers deserves credit for the short time it took to get the first of his two new Swedish designs on the pace against the defending Cup champion. The biggest difficulty in 'hiding' NZL-60's secrets was the boldness of some of the new ideas it visibly employed



On their way

Although we are officially not supposed to 'have seen or heard' anything during CORM's recent challengers' practice regatta, it's fair to say that circumstantial evidence suggests that Russell Coutts and the original members of Team Magic have done a swift job of getting their new America's Cup team up to speed. Several of the designers in Auckland during the last Louis Vuitton Cup observed that the 2000 Swiss Challenge's multiple-appendaged *beAPpy* boasted a very slippery canoe body. Coutts' Alinghi Challenge has certainly performed considerable surgery on its old Briand design, as well as putting it into a more regular foil configuration. But even in its present trial-horse mode the Swiss entry (allegedly...) took plenty of heavyweight scalps in the Hauraki Gulf. Some of Alinghi's crew work may not have been up to Team New Zealand standards (yet), but Coutts and Co. did nothing to suggest that they are not still the best America's Cup Class sailors in the world. Now the cat is out the bag the pressure will come onto the Swiss challenge's design team to produce two new boats worthy of their sailing team. They will. This well-funded team has a plethora of design talent available plus ample technical resource. There is also a good feeling of team ethos within Alinghi's technical department. The talented Rolf Vrolijk is nominally the group's name designer, but there is no suggestion that this is anything other than a group effort with many other well-qualified names intimately involved - Grant Simmer, Mike Schreiber and composites ace Bertrand Cardis among them. Of course, similar resources are available to several of Alinghi's Cup rivals. But if you can still get reasonable odds...

Cover: Thierry Martinez
Inset: Annemiek Van Kinderen

VOLVO OCEAN RACE 2001/02

36 On a bad day they finish... 2nd

illbruck skipper John Kostecki left Rio having heard his syndicate's plans for America's Cup 2003 were over. A blown spinnaker then cost him an otherwise flawless Leg 5 of the Volvo. But her 2nd to Miami still leaves *illbruck's* rivals trailing. **TIM JEFFERY**

38 Leg 5 diary and routing review

illbruck's passage to the front of the fleet had been majestic - for others Leg 5 was a disaster

FEATURES

32 Into practice

KAI GRAF and ERIC WOLF directed a CFD-based research programme for *illbruck* Challenge focused entirely upon the creation of a superior VO60 keel bulb. Their report is a good example of putting CFD theory into action

41 Party in the air

DAVID LUGG and ALAN SMITH have attracted considerable attention since their foil-borne International 14 appeared on the cover of our March 2002 issue. Now they plan to move forward another step - class rules permitting

44 Lift off...

Rumours are true, there is a new Maxi class in the wings and it will be based upon the simplest of box rules. DOBBS DAVIS looks at the launch of the *maxZ86* class and at Bob McNeil's inaugural *maxZ86* design from Reichel-Pugh

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ROB WEILAND puts the case for his new 'multiple' Judel-Vrolijk 60, Tracy Edwards celebrates

winning the 'race' for *Club Med*. Plus Volvo Diaries from DEE SMITH and IAN MOORE

14 World news

Orange looks strong in the south, Desjoyeaux's *PRB* is off the market, Bayer launch new tri for Le Peutrec, Coville on 'the dragons', Dalton (the elder) launches his turbo-Kingfisher, Hobart widows go for litigation, Rolex confirmed for Hobart Race, *Macquarie* lines up for 50 knots and a small but finely-crafted Acura SORC 2002. **IVOR WILKINS, PATRICE CARPENTIER, DOBBS DAVIS, ROB MUNDLE**

23 Paul Cayard

From Southern Ocean to South Beach can be a smaller step than it sounds...

25 America's Cup news

illbruck is out, Team New Zealand canardly wait to start (sorry), and that OneWorld decision: don't hold your breath. Plus **BILL ERKELENS** talks about comings and goings at Oracle Racing

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Of models, ACC keels and dinosaurs...

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MAGNUS LILJEDAHN reports on a contest of youth versus experience at this year's Bacardi Cup

46 Design - A new lean green machine

Belgacom Sailing Team technical coordinator GREGOIRE METZ describes the creation of the team's new 60 foot trimaran *Belgacom 2*

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GBR Challenge return to Europe content with their first season's work in Auckland

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Wowie Howie - talk about a fan club!!!

66 Seahorse race calendar



JACQUES VAPILLON/DPPI

Luc Pillot (inset) is a front runner for the helm of *Le Défi Areva* in Auckland. For the next few months, though, France's challenge is basing itself in Lorient, where their slender 2000 ACC design has been trialling hard against NZL-32, chartered from Team NZ. Once *Areva's* new boat is ready, their orange 'cigar' will be substantially rebuilt to make it more competitive as a trial horse in Auckland



Alain Gautier's new Van Pétégem-Lauriot Prévost-designed trimaran *Foncia*
 After several years of hanging in there with his ageing previous *Foncia*, Gautier could be forgiven for some excitement at his prospects with a shiny all-new design. As with so many of the new 60ft trimarans, the principal focus for *Foncia*'s 2002 campaign – especially for the sponsors – is November's singlehanded Route du Rhum. But before that there is a very busy Grand Prix series to contest, as well as several shorter offshore events. Regular *Seahorse* readers will be familiar with Gautier's multihull career, which more recently has included Ellen MacArthur among *Foncia*'s regular crew (Gautier was a key contributor to MacArthur's successful Vendée Globe campaign). Following his own dominant Vendée Globe win in 1993, Gautier had several years out of the limelight (not the only Vendée winner to find themselves in this situation) when he became a familiar – and welcome – sight on production, family racers at events like Spi Ouest. Gautier only returned to grand-prix competition five years ago, with a 'new' 60ft tri, *Brocéliande*, which in reality was a new main hull bolted to secondhand floats from Philippe Poupon's final big tri (which destroyed itself during its first few weeks afloat). *Brocéliande/Foncia* then underwent several major refurbishments in the hunt for competitiveness, but it was always a struggle to keep up with the newer, better-funded and more reliable competition. However, Gautier worked quietly away, developing what he had to the very limits, and he is now among the most respected in a tough group of peers. A solo sailor par excellence, if the new boat stays together he will be hard to beat come November

**Cover: Gilles Martin-Raget
 Inset:
 Newpan Flow Solutions**

VOLVO OCEAN RACE 2001/02

36 New faces

NewsCorp had been threatening the front of the Volvo fleet since the race start last September. On Leg 6 they finally made it stick. TIM JEFFERY reports as *illbruck* also scores an 'unusual' result

38 Leg 6 diary

Three and a half days of roller-coaster place changing was the story of a tricky, light-air stage

39 Chris Larson interview

No big fan of long races, but the arrival of the respected American tactician has brought a sharper edge to the *Assa Abloy* campaign

40 'In town'

Success in the USA is critical to the future of the Volvo Ocean Race. DOBBS DAVIS talks to Volvo's HELGE ALTEN and ANDERS LOFGREN

41 Leg 6 routeing review

DAVID BRAYSHAW

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33 Considered, thoughtful, on schedule...

RUSSELL COUTTS' standing in the America's Cup community is extraordinary. He takes his close-knit squad to an all-new, cold-starting team and within 18 months they are joint favourites for the Louis Vuitton Cup...

43 Upscale

GRAHAM BANTOCK concludes his present series on model yacht development with a look at the larger boat RC classes, where engineering restrictions still dominate many design criteria

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BLUEGREEN

Though it had been widely expected, confirmation that this year's Royal Hawaiian Cup – renamed after Kenwood ended its long-running sponsorship – had been cancelled sent shocks around the world's offshore event organisers. Kenwood Cup always struggled with its distant geography, but the unparalleled quality of the racing seemed enough compensation to keep people coming. How many reality checks does the sport need?

8 Update

German-resident American JOHN KOSTECKI talks about *illbruck*'s Volvo success and life thereafter, a grateful (and talented) Frenchman, Volvo Race Diaries and some 'challenging' new launches

14 World news

New multihulls go afloat for 2002, a good Spi Ouest regatta for X-Yachts, canard action in the Viaduct Basin, as Dennis wins (another) New Zealand Etchells title, Holmberg takes Congressional Cup in Long Beach and Mexico's fishermen experiment with a new trade... IVOR WILKINS, PATRICE CARPENTIER, DOBBS DAVIS, ROB MUNDLE

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And it's about time we were all introduced...

25 ORC Column

DAVID LYONS and OLIN STEPHENS

27 America's Cup news

Continued debate over the efficacy of the Protocol management leaves most impatient to start the competition afloat. Plus syndicate profiles of Alinghi and Prada Challenge

31 Olympic and small boat news

ROB BROWN visits his old hunting ground to report on 18 Foot Skiff development

46 Design – Hot Topic

STEVE NICHOLS may be among the most famous names in grand-prix car design, but he feels that some F1 design technology is even more applicable in the field of racing yachts

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Red fun (and counselling) at Cowes...

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It's a walk in the park...

66 Seahorse race calendar



A second red Seahorse cover for Bruno Peyron
 And this one was perhaps just a tad more easily earned, at least in the sailing sense, than Peyron's first Jules Verne success some nine years ago with *Commodore Explorer*. Last time around, just surviving the trip involved some extraordinary feats of multihull seamanship, as Peyron's five-man crew, including American Cam Lewis, constantly fought to tame their lightweight wing-masted 90-footer, especially when a Southern Ocean storm threatened to drive them onto the Chilean coast on their approach to Cape Horn. The story of 'that gybe', as Peyron's crew turned their bare-poled, constantly on the verge of capsize cat away from the coast in 80kt winds still makes chilling reading – Cam Lewis's book of the voyage is recommended to all Jules Verne aspirants... For this lap Peyron had horsepower and stability in hand, though sailing a 110ft cat around the world cannot ever be taken for granted! But as Grant Dalton said of *Club Med* after The Race, 'We were never worried about turning this boat over', something that could not be said of Peyron's first lap – which was also the first time the magic 80 days was broken. However, it is not easy to see where these ultimate round-the-world attempts now go from here. There is plenty of interest for The Race 2004, with Gilles Ollier's yard having a number of serious enquiries. But though 'MaxCat' campaigns cost a fraction of a Volvo programme (let alone the America's Cup) the market remains narrow. Running costs are enormous and the 60ft tris offer more exciting – and regular – competition. But then they're not cheap either, and there are more orders for 60s than there are boatyards to build them!

Cover: Gilles Martin-Raget
Inset: Rick Tomlinson/Volvo

VOLVO OCEAN RACE 2001/02

36 Game, set and...

When John Kostecki said in Baltimore, 'We must do better,' he had every intention of keeping his word. The price was extracted from his Volvo Race rivals who, after another dominant performance from *illbruck* are now chasing the crumbs. TIM JEFFERY

37 Leg 7 diary

Or how the nails went in one by one...

40 A totally good job

DOBBS DAVIS talks to BRUCE FARR and STEVE MORRIS about what can only be termed their 'successful' VO60 design programme

41 Leg 7 routeing review

DAVID BRAYSHAW

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31 Been there – done that

LAURENT ESQUIER, the world's best-known America's Cup campaign manager, is now on his second tour of duty with Prada Challenge

33 Lighter, faster. And stronger

Team Tyco sail designer GRANT SPANHAKE and the Volvo Race sail programme...

42 From the lab

Behind each small 'tweak' to the IMS VPP lies a great deal of effort. JIM TEETERS

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2003 Admiral's Cup Big Boat band is confirmed, Peter Gilmour on 'that' Cup scandal, Volvo Race Diaries and the sailing world mourns the passing of Warren Jones – the man behind *Australia II*

14 World news

Orange hits the jackpot with a second Trophy Jules Verne for Bruno Peyron, AG2R Transat report, Cammas delivers on his word in Lorient, Multiplast prepares for The Race 2004, no more Open 50s for the Vendée Globe, life in the Viaduct Basin gets nasty, euros aplenty in Elba, Kovalenko goes partner-swapping in Oz and Kahn goes it alone. IVOR WILKINS, PATRICE CARPENTIER, DOBBS DAVIS, ROB MUNDLE

23 America's Cup news

The OneWorld 'affair' moves towards its (initial) conclusion as Team New Zealand weighs in. Plus syndicate profiles. TIM JEFFERY

27 Olympic and small boat news

It's simply all a question of good communication, says skiff maestro ROB BROWN

46 Design – No compromise

GEOFF STAGG describes the new Farr 36 OD from Farr Yacht Design - which promises to be a breathtaking, single-purpose machine...

48 Seahorse raceboat build table

50 RORC news

Some long-overdue moves on international liferaft standards are finally under way. ALAN GREEN

65 Seahorse Sailor of the Month

Quiet but he's getting tougher with every day...

66 Seahorse race calendar



Actually, it's not the Caribbean at all – but Carnac in Brittany during the recent - enormous - Eurocat Regatta, which this year attracted more than 350 boats. The multihull culture runs deep in France, where youth clubs and sailing schools now place at least as much emphasis on two hulls as on one



'That's what we came for' – John Kostecki finally gets to lift the trophy for the 2001/02 Volvo Ocean Race

The last few stages seemed to take forever for the quiet Californian and his efficient and fast team. After victories on the two opening legs, a win by widely tipped *Assa Abloy* into Auckland served Kostecki notice that there would be no 'Steinlageresque' clean sweep. While *illbruck* was super-quick reaching, the German Farr design was proving no more than adequate in some other conditions, and the American skipper set to upping his game mid-race, just as close friend Paul Cayard had done four years before. *illbruck* proved outstanding in every aspect of the long-distance game, being notable for their crew cohesion in particular: a near-sinking on Leg 2 barely seemed to faze them. In a physically tough race, with crew constantly switching boats, only *illbruck* and *Amer One* got through the event without an unplanned change. And Kostecki's Olympic and America's Cup experience stood him in good stead when it came to making the most of sail limitations. Certainly no other team enjoyed the scale of *illbruck's* pre-race testing, but it was still notable that Kostecki's team managed their sail inventory well enough to be putting on new sails in both La Rochelle and Gothenburg. This was a close and evenly matched fleet, exactly the type preferred by this self-confessed One Design enthusiast. Kostecki ground out small gains wherever they could be found, and in the final analysis had margin in hand around the world. *illbruck's* approach was best summed up in the style of their outstanding navigator Juan Vila: don't always try for the best place – go fast and never, ever risk being in the worst.

**Cover: Rick Tomlinson/Volvo
Inset: Thierry Martinez/Assa Abloy/Christian Fevrier**

VOLVO OCEAN RACE 2001/02

36 The right result

Neal McDonald and *Assa Abloy* pulled off a great Leg 8 win to keep *illbruck* under threat to the end. But a confident and prepared John Kostecki was not planning to let this one slip away. TIM JEFFERY

38 Dee Smith – Race Diary

Late to the plate and with an unknown design *Amer Sports One* finished feeling this was a job well done

41 Reference point

In a light-air finish amid vast crowds and in plenty of summer sunshine, it is easy to overlook what this event is all about. PAUL CAYARD

42 'Terribly unhealthy'

DR STEFAN BRANTH tells HANNEKE KIJLSTRA the results of some of his ongoing research into the health of the Volvo Race crews

FEATURES

45 Number 1 – Tom Schnackenberg

There was one name at the top of every shopping list after the 2000 America's Cup, but unlike many of his team-mates he wasn't for sale

48 Refresher course

Prada mast designer SCOTT FERGUSON looks at some of the key elements and numbers involved in modern raceboat spar design

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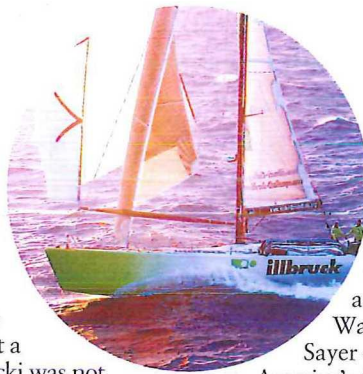
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Final Volvo Diary from IAN MOORE, blasting across the Med with HOWIE HAMLIN on *PlayStation*, concern grows after man overboard incidents in US and 2002 IRM championships



14 World news

Fuji and Peyron (Loïck) win the 'Lighthouse' battle of attrition, Peyron (Bruno) announces new Race Tour, Warren Jones remembered, Chris Sayer – 'sheep farmer or ocean racer', America's Cup battles begin (on San Francisco Bay), Jamie Boeckel lost from *Blue Yankee*. IVOR WILKINS, PATRICE CARPENTIER, DOBBS DAVIS, ROB MUNDLE

24 Rod Davis

The Prada Sailing Director has some sage advice for anyone going out there after the top spot

27 Olympic and small boat news

In the third part of his current series, former world skiff champion ROB BROWN talks to North Sails' MICHAEL COXON about the latest developments in spar construction and sail design

30 ORC Column

Brava Q8 and the new Grand Soleil 44 *Wind* share the IMS spoils in the Mediterranean. DON GENITEMPO and NICOLA SIRONI

33 America's Cup news

Money and time wasted as OneWorld 'versus' the Arbitration Panel threatens to peter out, Laurie Davidson in trouble (again). Plus Défi Areva and Mascalzone Latino profiles. TIM JEFFERY

54 Winged Kiwi

Graham Dalton's new Owen Clarke-designed *Kingfisher* development *Hexagon* has been flying in early trials. MERFYN OWEN reports

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58 RORC news

And the Rolex Commodores' Cup and 2003 Admiral's Cups are both steadily moving forward

73 Seahorse Sailor of the Month

Bruno scrapes it. Now the *illbruck-Assa* rematch

74 Seahorse race calendar



It's not racing and it's not carbon, but it's certainly about water and definitely about spectacular and efficient engineering. Built in the spirit of Brunel, the new Falkirk Wheel links two major Victorian canals. Rotation takes seven minutes and each cycle uses about the power of two boils of a kettle...



Now for the home game!

Dean Barker was extremely impressive in his three-nil defeat of former mentor Russell Coutts in the final of the Swedish Match Cup in Marstrand. After some patchy performances on the Swedish Match Grand Prix Tour earlier in 2002, many at Team New Zealand will have been breathing more easily after Barker's Marstrand result. With this year's ACC fleet all locked in one corner of the rule it is likely that match-race sailing will play a bigger role in Auckland this summer than it did in 1995 and 2000. Of course, the same prognosis was made in late-1999, just a few weeks before Team New Zealand blew the doors off Prada Challenge upwind, down and across...

As the odds stack increasingly against Team New Zealand, under the sheer weight of dollars their challengers are throwing at the Cup, the final in Sweden carried extra anticipation as many expect Coutts and Alinghi to be the pairing lining up against Barker and Team New Zealand next year. However, that view may have looked more assured a few months ago, before Oracle BMW Racing moved into a higher gear with the arrival of their two new Farr-designed boats. Builders Richard Gillies and Tim Smyth have clearly turned ACC building into something of an artform with their two new female-moulded designs. One who should know also cautions anybody from betting against the work achieved over the past two years by Farr and the Oracle technical team. Certainly the computing power available to this team has allowed an extraordinary amount of race simulation and iterative design development, before the first piece of carbon was cut. But then there is always that final 'X' factor, which still seems rather uncertain with Oracle Racing. And maybe rather less so with Russell Coutts...

Cover: Sergio
Inset: David Thompson

FEATURES

30 Low profile – major factor

DOBBS DAVIS talks to international match-race judge JOHN DOERR about recent developments in the discipline and how they may affect the forthcoming America's Cup. Plus a look at next year's Swedish Match Grand Prix Tour

34 Nothing new under the sun – Part I

With the dockside talk in Auckland all about forward rudders and variable keels, aerodynamicist DAVID HOLLUM takes a two-part look at the fundamentals of multi-foil configurations and discusses where advantages may be identified within the confines of the ACC rule

39 Knowing the ropes

BILL BIEWENGA outlines some of the latest developments in cordage and soft-fibre rigging

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Ben Ainslie takes the Finn Gold Cup at his first attempt, ISAF vice president FERNANDO BOLIN comments on the raging debate over Rule 42 enforcement, GBR Challenge head PETER HARRISON talks about future Cup plans, a look at development in the IMS 600 fleet and the late Bernard Hayman remembered

14 World news

Loïck Peyron going faster and faster (again...), a confession from le Défi, France confident for Commodores' Cup, BMW go America's Cupping,

red socks onboard but not for sale at Team New Zealand, *Shockwave* heads to Hamilton Island, gaff skiffs to race in Auckland, *Zephyrus* takes a maiden win for the MaxZ 86 class and one more for *Pyewacket*. IVOR WILKINS, TATJARNA POKORNY, PATRICE CARPENTIER, DOBBS DAVIS, ROB MUNDLE

21 America's Cup news

Oracle fight hard to protect Prada from early dismissal (sic), and celebrate their two outstanding new boats, JOHN CUTLER interviewed, plus syndicate profiles: Victory and GBR Challenge. TIM JEFFERY

27 Paul Cayard

On Rule 42, America's Cup goings-on and Prada's attempt to stay in the game...

28 Olympic and small boat news

18 months after its appearance on the Olympic stage, US Yngling sailor CAROL CRONIN looks at the escalating pace of development in the class

42 Design – Expanding influence

CLAUDIO FASSARDI shows how a contracted outside CFD consultancy contributed to the final design of JAVIER ACEBAL'S new high-performance 100-footer for the Mediterranean circuit

46 Seahorse raceboat build table

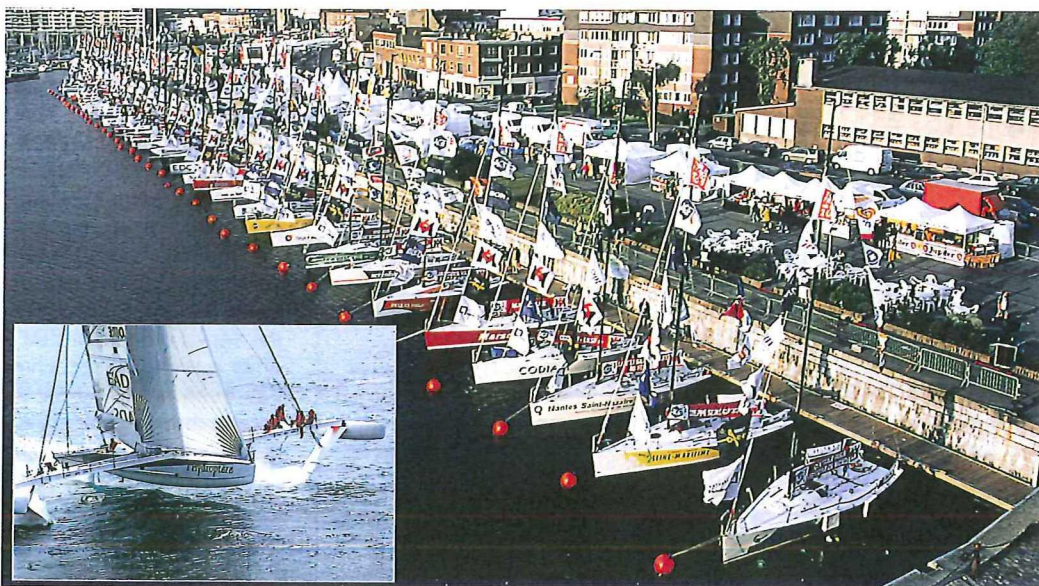
48 RORC news

New safety guidelines from London, plus a look at some of the potential pitfalls of the GPS system

65 Seahorse race calendar

66 Seahorse Sailor of the Month

One for the 'runner-up', plus two very different candidates for next month's award



This year's Tour de France Mumm 30 fleet lined up in Dunkerque before the start. The Mumm 30 has confounded doubters by proving well suited to this rugged marathon contest – in particular the reliability of this well-developed one-design sets standards other 'wannabe' classes still struggle to match. *Inset*: as foils move to centre-focus in multihulls the ageing *Hydroptère* is attracting renewed attention



Let's play for real

The sailors among Team New Zealand's youthful and enthusiastic squad must be delighted to be able to start work with the first of their new ACC designs in the flesh, rather than just on the computer. Whether bluff or not, TNZ are also going to extraordinary lengths to conceal their new boat, stopping their tows some distance from the Viaduct Basin to put on 'full-length' modesty skirts. Bow-rudder, knuckles, aft chine, bulb-bow... if nothing else it's giving everyone plenty to speculate about. But TNZ's sailors sounded confident after NZL-81's first outings, despite the daunting resources stacked up against them as defenders of the oldest trophy in sport. Just as early reports suggest that Russell Coutts and Alinghi gave Oracle BMW a whopping in their secret trials in late-August, so word was filtering out that NZL-81 is comfortably beating stablemate NZL-60, the boat that won the 2000 Cup with speed in hand – and NZL-60 is one of several 2000-generation ACC designs to have been radically turbo-charged to provide a better development tool for this year's crop. Even taken with some salt, such unconfirmed reports point to a fascinating contest, with upsets likely among a fierce challenger fleet and a strong defence looking probable. However, remember also that in early 1995 reports were circulating widely about the worrying lack of speed in testing of NZL-32, the boat that went on to capture the Cup in '95 with pace that defence helmsman Paul Cayard described simply as 'too depressing'. Meanwhile Stars & Stripes have taken their recent misfortune as opportunity to slip a new bow on to USA-77, a move that would have been financially untenable in DC's previous campaigns. Add in a well-funded Dennis Conner... and you get a great mix for the southern summer.

Cover: Stéphane Lamy/DPPI
Inset: Dick Hampikian

HORST LIEBNER

LOUIS VUITTON CUP FEATURES

28 When the flag drops...

After some 20 years of America's Cup reporting TIM JEFFERYS looks ahead at the forthcoming Louis Vuitton Cup challenger selections

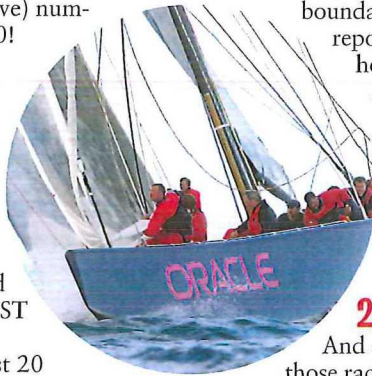
30 The odds

A quick guide to each of the challenger candidates as well as a variable (brave) number of points for each out of 10!

FEATURES

34 Faster faster

In the final preparation stages for this year's quadrennial Route du Rhum solo Atlantic classic, multihull designers MARC VAN PETEGHEM and VINCENT LAURIOT PREVOST describe the evolution of their grand prix designs over the past 20 years



41 Nothing new – Part II

Foil specialist DAVID HOLLUM develops last month's discussion of forward and twin-foils to look at the efficacy or otherwise of twin-rudder configurations for ACC and 12-Metre designs

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Top multihull designer NIGEL IRENS addresses the realities that lie behind the numerous recent structural problems in the Grand Prix multihull fleet, *Australia II* co-designer PETER VAN

OSSANEN discusses the history and today's implications of the current Cup Protocol on nationality. Plus a look at the first-launched of the new Max Fun 35s from the Netherlands

14 World news

2002 Route du Rhum preview, more mast failures, Figaro and Tour de France are fought out to the end, America's Cup 'cold war' crosses the boundaries, Rolex Commodores' Cup reports, 'Hollywood' Roberts gets the hots for the 2003 Admiral's Cup, *Shockwave* eclipsed by a very *Wild Oats* at Hamilton Island. Plus UBS Challenge breathes new life into match racing in America. IVOR WILKINS, PATRICE CARPENTIER, DOBBS DAVIS, ROB MUNDLE

24 Rod Davis

And at long last it's time to put on those racing clothes...

26 Olympic and small boat news

STEVE MITCHELL reports on his riotously successful trip to LA for the Nautica 2002 Star Worlds with 2000 Finn gold medalist Iain Percy

44 Design – Taken for granted

Finite Element Analysis is very often mentioned in passing: Australian structural engineer and mast specialist PETER SCHWARZEL discusses the methodology behind today's FEA studies

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Caught in an off-moment, one of the rapid fleet of Sandeq ('pointed') boats raced by the merchants and fishermen of Sulawesi, a small island north of Java. These triple-hulled craft range in length from 5m to 15m and have regularly been recorded at speeds in excess of 25kt. A huge lateen rig powers the Sandeq, for which a 200-mile, four-stage inter-island offshore contest is the highlight of the annual race season



OneWorld and Alinghi consistently made the running during Round Robin 1 of the 2002 Louis Vuitton Cup

Alinghi were always expected to shine, having gone unbeaten through a series of informal trials. However, the flawless performance of OneWorld, with a relentless combination of good pace and excellent sailing skills, surprised rivals and spectators alike. Many experienced Cup watchers were expecting a less than stellar performance from the Seattle team, citing a combination of 'unexciting-looking boats' (from one rival skipper), which seemed to have progressed little from NZL 60, as well as the disruption of Reevesgate, plus the financial black hole that had temporarily put the brakes on the team's plans 18 months before. One reason the blue boats look less than dramatic is that they are indeed a restrained iterative development of Laurie Davidson's previous ACC designs (they were drawn too early for co-designers Phil Kaiko and Bruce Nelson to have had much fundamental influence). But it seems that combined with effective refinement (the boats were the first pair of new-generation designs to go afloat), a successful sail programme and, above all perhaps, thoroughly developed crew work, the overall package has been good enough to see off everyone to date. The contest with Alinghi promised to be OneWorld's toughest battle, but that turned into a non-starter after Coutts' afterguard suffered a rare lapse of judgment in the time-and-distance department. The question for Peter Gilmour's team now is whether or not they have enough development still in the bag to stay ahead. Alinghi have visible (albeit small) room for improvement in crew work, and Oracle have so far seemed strangely out of mode. Can OneWorld keep it up? TNZ did it in 1995, the Plastic Fantastic failed at the last in Fremantle in 1987. The next rounds will be fascinating
Cover: Thierry Martinez/Alinghi Caocret/Forster/DPPI

LOUIS VUITTON CUP
30 Catwalk hell!

TIM JEFFERY reports from Auckland on Louis Vuitton Round Robin 1, which saw the action afloat easily matched by that ashore

32 They said it

... and just possibly some of them may live to regret having done so

32 First thoughts

RUSSELL COUTTS was reasonably comfortable with Alinghi's performance in the first round robin. Bad news for his rivals then...

35 WOW!

CHRIS LAW has seen the future – but thinks there are going to be some mighty upsets along the way

36 Happy so far?

JOHN CUTLER has terrific job security, calling the shots for Oracle BMW helm Peter Holmberg with boss Larry Ellison standing beside him and Paul Cayard and Chris Dickson on the bench!

FEATURES

39 Sorely tested

Given the increase in loads that stiffer boats and rigs bring to every America's Cup it is surely remarkable that weight still continues to be pared away from deck gear and winch layouts. PHIL ATFIELD (Lewmar) and MESSRS. ORLEBEKE, MERELLO and GOGGINS (Harken) report on the latest developments

45 Reality check – Part 2

MARK TURNER looks at the best way forwards for young shorthanded hopefuls

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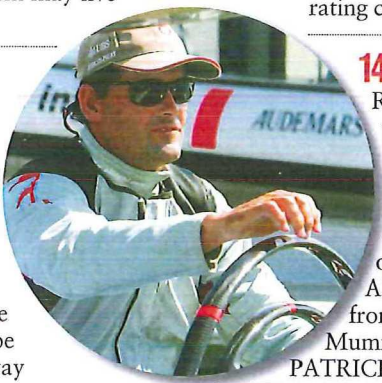
PETER RUTTER

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LARRY ELLISON discusses future America's Cup plans... and DR MICHAEL GANAL of BMW talks about how to pay for them. Plus a stellar performance from an old FD 'salt' and rating comparisons from an active user



14 World news

Route du Rhum preview, Beyou takes French singlehanded title, VDH is off again, *Excalibur* enquiry begins, *Wild Oats* heads to Admiral's Cup as Maxi owners head to Sydney to check her out, Stamm dominates Around Alone opener, defence analysis from Auckland and another Italian Mumm 30 success. IVOR WILKINS, PATRICE CARPENTIER, DOBBS DAVIS, ROB MUNDLE

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Suited-up and on the starting handlebars

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ANDY RICE talks to the UK's 'star' Olympic coach DAVID HOWLETT

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DAVID LE PELLEY looks at the changing face – and users – of Auckland's Twisted Flow Tunnel

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Hang in there, kiddo!
 Left: Pedro Perello's B&C Sinergia 40 *Siemens Mobile* finished second at the inaugural 17-boat IMS 600 worlds in Bayona behind Pedro Campos's fellow B&C design *Telefonica MoviStar*