

Bring back the bling

The sun is the worst enemy of wood, varnish and oil, but a new Kiwi-designed polyurethane is allowing boaties to bring back the bling of brightwork, says **James Frankham**.

Salt water glistening on varnish, sun sparkling on chrome rubbing strakes. Those were the glamour days of boating when curvaceous launches plied the Waitemata glossy with brightwork, and the shimmering apparition of bronze fittings graced the cap of every wooden mast.

Then all those 1950s refrigerators belched their chlorofluorocarbons into the atmosphere, eroding both the ozone layer and the heyday of boat bling.

Under the glare of intensifying ultraviolet light, varnish peeled off almost overnight. In desperation any salty worth their salt stepped alloy sticks or simply slopped on the enamel.

A few puritans pressed on, religiously sanding and recoating their varnish every season with increasingly expensive solutions, but within the decade most savvy souls had realised it simply wasn't worth the effort, and the brightwork was gone.

Clever scientists stretched out the lifetime of some varnishes considerably from their 1950s cousins by using pigments and adding waxes to slow the inevitable hardening and brittleness of ageing, but the

basic chemistry remained much the same: a chemically-modified drying oil.

Nowadays you can pay more than \$60 for a single litre of varnish – a remarkable price given that it doesn't even have any colour in it. Some boaties found a compromise in Danish oils which can be wiped on. They penetrate deep and give you that natural wood finish you so desire. Oil also does away with the irksome task of sanding, but it needs to be recoated frequently, it isn't glossy, it doesn't turn heads and no matter which way you look at it, it just won't sparkle. Fibreglass starts to look pretty attractive, even to the most ardent classic yachtsman.

A couple of years ago I bought a boat with varnish hanging off the coamings in sheets. She had a wooden mast as well, but a previous owner had long ago bowed to the power of ultraviolet and painted it. After discovering some rot near the top spreader I hauled the pin out, stripped it down, and gazed upon the alabaster glow of nude spruce. How was I ever going to paint that? Sacrilege.

Both varnish and wood oil represent a lifetime of perennial hardship, and

would make me a slave to an annual shimmy up the mast to sand and re-coat, and both products fail for precisely the same reasons. Once cured, they continue to react with oxygen, are further broken down by ultraviolet light and contact with water, getting harder and harder until they eventually crack and peel, first around timber joints, then all over the surface. The lignin component of the timber (which is water soluble) simply washes away, leaving the tell-tale fuzzies (actually cellulose, the tougher structure of wood) and the familiar look of weathered timber is evident to all.

In an humiliating twist of fate, the resulting by-product is food for micro-organisms (fungi, mould and such like) which literally lap up the decomposed varnish, eating your hard work. Surely, in this modern world of Coke slushies and chemical weapons, some bright spark had come up with a better formula?

They have, and I found it on a British

magazine website. It's called called Coelan and is manufactured with precision in Deutschland. In a side-by-side, real-world test of a dozen clear coatings it had come up trumps, staying completely intact after four years in the thin loom of Suffolk daylight.

I wondered how it would perform in New Zealand? Certainly better than its

neighbours on the test rack which were scaled like fish, some disposed of after just a year and a half.

But it wasn't a fair fight, to be fair. All the other products were just varnishes, oils and sealers, while Coelan

was something entirely different. Touted as a "marine aliphatic flexible polyurethane" it hailed from a completely different branch of chemistry so that it was completely inert, flexible, abrasion-resistant, and most importantly, didn't degrade under exposure to the elements.

It seemed too good to be true, and it was. By the time the polyurethane was

"The total savings in time and cost can make your head spin, and it's single-pot."



Kathryn Anne, Frankhams's 1949 Woollacott 30

made by Germans, paid for with Euros and flown half way around the planet, it accrued truly stratospheric value – around \$125 to cover a square metre. Then the New Zealand agent discontinued the product.

My misery lasted a month, until the publication of the subsequent issue of the British magazine, which alerted readers to a new marine aliphatic flexible polyurethane all the way from New Zealand, a land of frugal boaties labouring under the world's strongest sunlight. This was the stuff I had been pining for.

A few calls revealed that classic boat enthusiast and flooring paint manufacturer David Waddingham had inclined his mind to the problem of better brightwork and had come out with a radical formulation: Uroxsys Marine Aliphatic. Like Coelan, it's a non-yellowing polyurethane, but super-charged with extra UV inhibitors to survive in New Zealand light – and it has a more natural-looking finish than zee German stuff.

Naturally, I offered to test-drive this new snake oil on my freshly stripped spar and Waddingham assured me that the lifetime of the product exposed to the full glare of the austral sun was more than four years, probably longer. He knew this because there were half a dozen boats bobbing around in the harbour that had Uroxsys applied to their surfaces, and they still looked perfect.

Since then the formula has become considerably better. In fact the ultraviolet resistance of this polyurethane is so comprehensive (a single coat cuts out 84% of UV) that visible light will begin to suck the colour out of the timber before the polyurethane needs attention. To get around this anomaly of longevity, one can use a primer with a pigment dye which will

never bleach out. Every subsequent topcoat is clear as gin, as opposed to varnish which builds a golden tone with each coat.

This dye isn't for everyone, and is not necessary on all timbers, so it remains optional. However there is one fortunate corollary of using it for opportunists such as myself. I can colour-match my oregon boom to my spruce mast, which could look a little jaundiced when varnished. Purists may leer at party tricks such as this, but they can use the same dye across all their timbers if they choose – typically a golden tone pigment for cedar, kauri and oregon, and a yellow tone for lighter timbers – or forget it altogether.

Side-by-side the results are near identical to the finest varnishes on the market with great gloss, terrific tones in the timber and a very natural look. It's about the same price as quality varnishes as well, but you have to use it six times less often; the total savings in time and cost can make your head spin, and it's single-pot, curing with the moisture in the air. No precise mixing of hardeners or catalysts is required either as this stuff works straight out of the tin.

Although it can be applied over varnish in good condition, it's recommended to replace varnish with an entirely new system, beginning with bare timber. You wipe on the primer, burnishing it a little with a rag, then after 6-12 hours, brush or roll on the clear-coats which can go on coat-on-coat a couple of hours apart. In good conditions you can load three on in a day. The real beauty of it is that, unlike varnishes that need to be applied thinly, with polyurethane you're just building a thick film and only the finishing coat needs a degree of care. Six clear coats are required for most applications.

The results are near bulletproof.

Brightwork



David Waddington's application tips

1 Before starting, estimate the size of the job area in square metres. For each square metre, allow 100mls of primer and 500mls of topcoat overall.

2 Apply one coat of primer only then keep applying the topcoat until the product is finished (usually around 6-8 coats).

3 Make sure temperature is between 4°C and 30°C – don't be concerned about high humidity levels providing you don't hit dew point.

4 The topcoat can be over-coated on the same day once you are able to press the coating without leaving fingerprint indentations.

5 Don't try to build lots of thin coats: this product can be applied reasonably heavily without the cure times being affected or skinning occurring.

Because it's not hard or brittle like varnish, Uroxsys will dent with the timber without cracking if knocked. Lab tests have stretched it to two and a half times its length and it bounced back, and I got to observe this for myself after a recent semi-controlled gybe with an unruly cedar spinnaker pole. A couple of dents, but no cracks, no re-coat necessary. More sailing, less sanding.

Uroxsys is the only marine aliphatic flexible polyurethane currently available in New Zealand, but boaties with woodwork should keep an eye out for new entrants to the market, as this chemistry is likely to be replicated by the big brands in coming years.

So let your timberwork see the light of day. Maligned by cosmic rays and hidden for decades under a thick patina of enamel paint, bling is back and has never looked better.

James Frankham is editor of *New Zealand Geographic* magazine.

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Lasting impression

Eighty litres of Uroxsys clearcoat have transformed the classic 36-foot Woollacott ketch *Rere Ahi*.

If ever there was a floating billboard for Uroxsys Marine Aliphatic, *Rere Ahi* is it.

Built and launched in Devonport in the late 1960s, this Kauri ketch has recently undergone a full makeover.

Rere Ahi's new billionaire owner wanted the 36-footer brought back to her original good looking self, before she was shipped to his private sanctuary and seven-star resort on Laucala Island in northern Fiji.

Whangarei boat-builder Jon Jones was charged with the mission of restoring her, which started with stripping the painted hull, interior, two masts and overseeing the replacement of some teak decking. It was a mammoth undertaking, with a team of up to 10 men on the job for a month.

In total, 80 litres of Uroxsys varnish

were lavished on the exterior and interior of the John Woollacott design, leaving her with a finish that her original builders Charlie and Allan Kemp would no doubt be proud of.

Jones says the varnish took some getting used to, but once he and his team had the knack, they were able to pile on up to three coats a day, sanding between every fourth coat or so. In some places *Rere Ahi* received up to 10 servings of the Kiwi-made varnish.

Once the stripping, teak replacement and varnishing had been completed, a modern integrated electronic system was installed in the 10-tonne modern classic.

A complete Raymarine package includes a powerful, forward facing sonar as well as two fish-finding and



Jon Jones




depth sounder units and a modern digital sound system.

A 5kVA generator has been squeezed under the pilothouse to power the air conditioning unit, while a new Yanmar engine and clustered sailing controls on the port side have been included.

A sophisticated lighting system completes the package, automatically coming on at sunset, illuminating the deck and showing off *Rere Ahi's* glistening

brightwork. After eight months in the shed, *Rere Ahi* was shipped to Fiji and is now available for guests to enjoy at the Laucala Island Resort. ■




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