

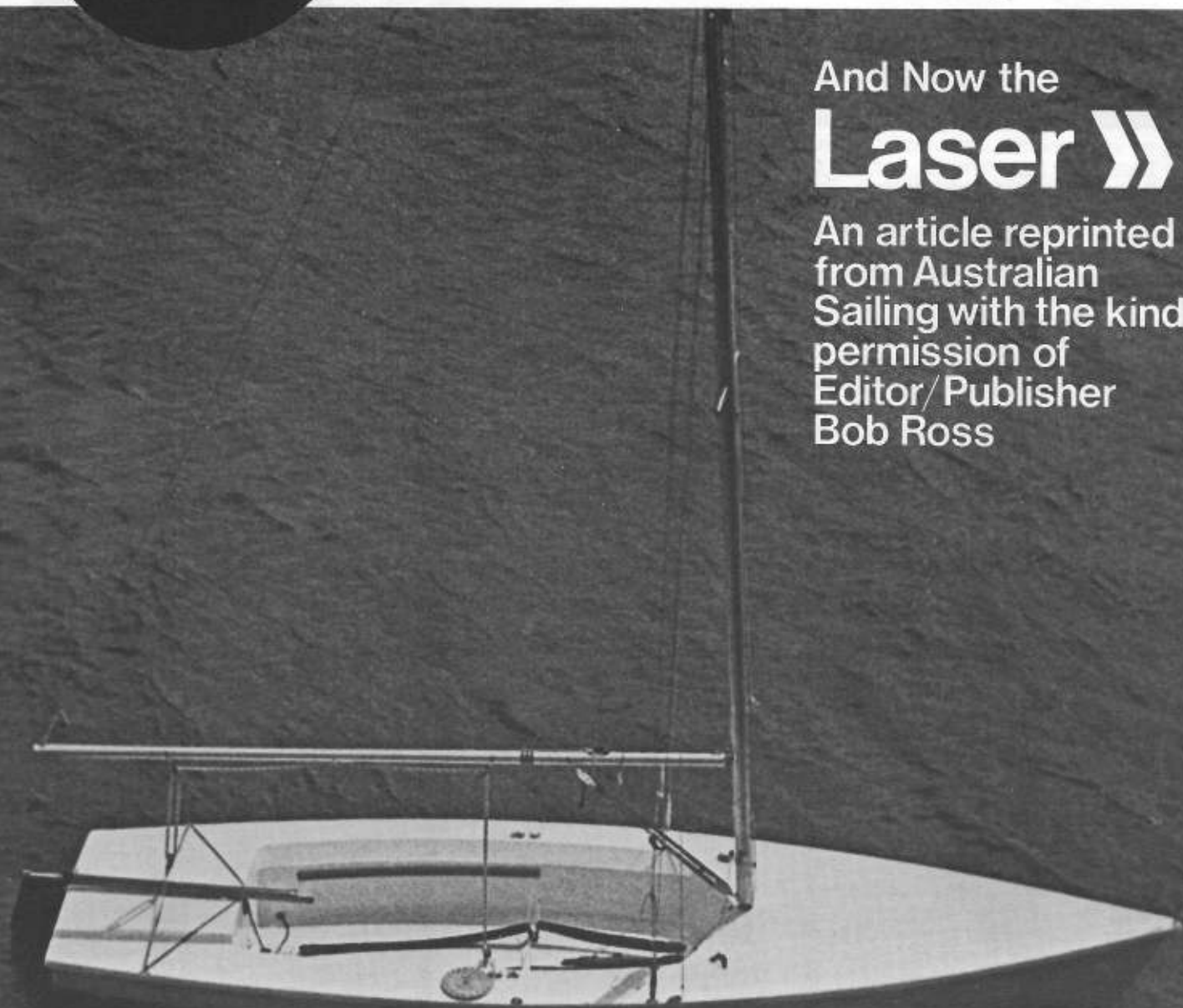
SAILING

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And Now the
Laser »»

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And Now, the Laser II

By BOB ROSS

Encore to the Laser is on its way to international markets from a Sydney designer.

A follow-up boat to the phenomenally-successful Laser singlehander, aimed at giving two people instead of one a mass-produced package fun boat, is on its way to the international market from the unpretentious factory of Sydney sailing design, research and development man Frank Bethwaite.

Like the Laser, it is intended to appeal mainly to the younger sailor. But I am sure, after sailing the boat myself, that it will also grab the interest of parent/child combinations and adult crews just out for a bit of recreational fresh air and exertion.

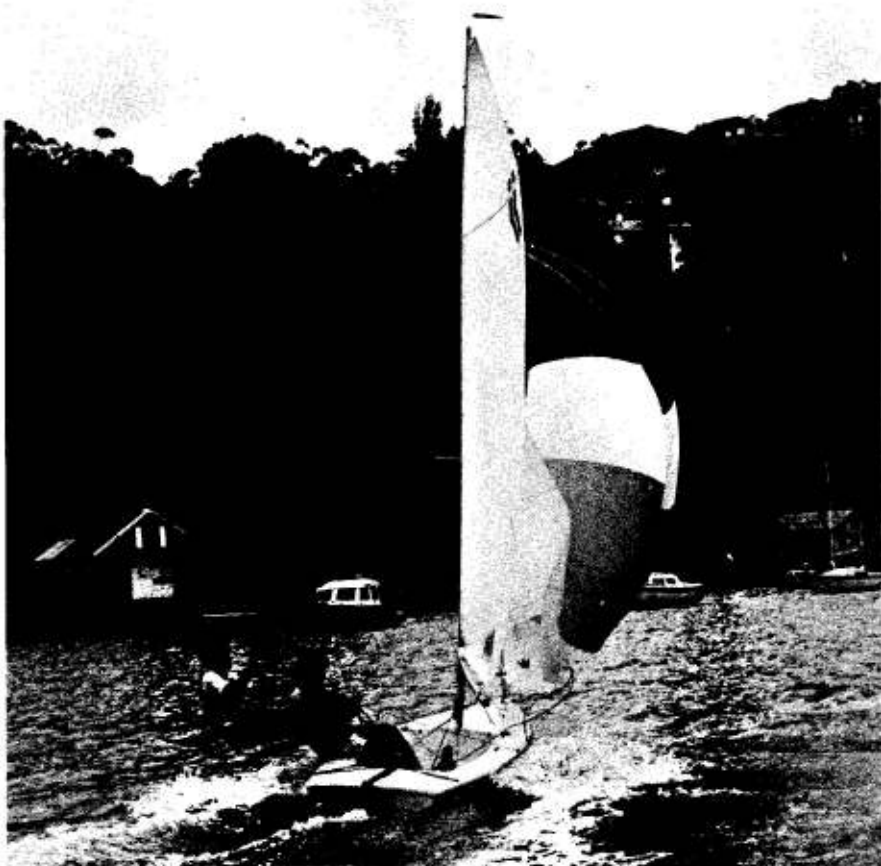
The boat, to be known as the Laser II, designed by Bethwaite, with "cosmetics" and rig worked over by Ian Bruce, president of Performance Sailcraft International, is intended for launch on the Australian market in June.

The major release in the US will be at the Annapolis Boat Show in October, although about 300 will be released before that, to dealers, by Performance Sailcraft.

Bruce stayed on in Australia, after competing in the world Laser championship in Perth, to lay up two fibreglass prototypes with Bethwaite and test-sail them mainly on the more remote corners of Sydney Harbor — a degree of secrecy surrounded the project.

Finally in February, after modification to rig proportions that gave the boat more sail area and refinements of sail shapes, with the help of the Sydney Elvstrom loft, Bethwaite and Bruce dropped the boat into the Sunday race crowd at Bethwaite's home club, Northbridge SC.

Bruce said: "We had all grades of skills in the boat, from beginners to experts. It proved very stable and yet very fast. Youngsters did not feel intimidated by it but it was still enough of



Laser II prototypes plane away easily on a 12 knot gust.

a boat for a couple of young experts to have a ball.

"There is enthusiasm for this boat I have not seen since we introduced the Laser, particularly among the kids — it is their scale; it is their size."

The Laser II project began last July. A two-man boat had been developed in New Zealand for Performance Sailcraft to market in New Zealand and Australia with the Laser and world rights to build the boat were offered to the parent company in Canada.

"Before making a decision, we asked to see it," Bruce said. "And a boat was sent to Montreal. We felt it was just too small and would not carry enough load. But that started us thinking towards creating a boat of this type."

Mass marketing creates problems of its own. The boat had to be big enough to carry a pair of well-developed teenagers or young adults and yet small enough to be packed into shipping containers for economical transport. This placed severe restrictions on

beam.

Bruce said: "We wanted a boat that was small in terms of construction, light enough to be portable, yet it had to be a big boat in terms of handling and performance characteristics.

"That is a very tricky problem. There are not too many small boats in the world that would meet those requirements. And at that point, I felt Frank (Bethwaite) was the only person who could do it."

Bethwaite and Bruce had teamed before to produce the Tasar, the 14ft 11in high-performance "family" dinghy that was in design terms basically an extension of Bethwaite's successful NS14 and Nova dinghies.

In hull shape and rig, the Laser II is nothing like the Tasar. Because it had to be container-stacked and stable at mooring with the sails down, the sides are almost vertical and the hull is much flatter than the deep vee Nova/Tasar shape.

Bethwaite went instead to the 10-



The 10-12 knot breeze had a 275 lb crew working hard.



Heavy (375 lb) crew in the same breeze did not bog down.

year-lineage of his successful Cherub class designs that eventually won the Australian championship four years running, produced the world champion runner-up and then world champion (in the period 1974-1976). His 18-footer design KB, which was taken from that Cherub line, was runner-up in the world championship two years running (1977, 1978).

"I have taken the way these boats handled the water and applied it effectively to a 13ft 9in waterline boat" Bethwaite said. "It's a boat that should be able to keep going in all conditions and carry weight."

"I have observed many classes over the years where once a crew reaches a certain weight, it is no longer competitive. So I have designed a hull with abundant buoyancy that handles the

water well.

"It is basically a chine boat with the chines rounded off so it can withstand abuse — there are no knife edges to break."

The hull is light enough at 150 lb to be car-topped. The deck is standard Laser fibreglass/Airex foam sandwich construction and the hull is standard Laser fibreglass laminate except that Cormat strips are used for stiffening instead of foam stringers. Cormat, a substance like a dehydrated blotting paper heavily impregnated with microballoon, 4mm thick, is laid in wet, limp like Wettex, and cures with the hull. This saves laminating the hull and then going back to it later to instal stiffeners.

Much of the test-sailing in Sydney, initially with a wooden prototype last November, was directed towards deciding how much sail the Laser II should carry.

Bethwaite and Bruce soon realised they had a hull that could carry weight. Bethwaite designed it for a combined crew weight of 270 lb to 280 lb that would keep going with 300 lb.

The sail area was pushed up from an initial 111 sq ft to 119.

Then Bruce decided more sail should be added to give performance to heavier crews and some of the same sort of challenge to lighter crews that the Laser provides. They went deliberately too big at 129 sq ft and finally settled for 125 sq ft.

The prototype sails were designed by Hans Fogh in Canada. Continued development went into them in Sydney

Angled flat inwales make the Laser II easy to swing from.



by Elvstrom which provided the sails from which patterns for mass production will be made. The mainsail is a "soft" full sail, something like the Laser's with the same outhaul system, and a two-part Cunningham eye line that clams off on the mast.

The rig is simple with the mast (stepped on deck and fixed) supported by forestay and shrouds with fixed diamonds over struts giving athwartships stiffness. Although Bruce is happy with the pear-shaped one-piece mast, he says a two-piece mast may be developed for convenient spar stowage. The boom is the standard Laser section.

Centreboard section is the same as the Laser; the rudder stock is the Tasar's.

The cockpit is double floored with flats on its edges for comfortable hiking — "calf plates", Bethwaite accurately calls them. A self-bailer is recessed in a well in the after end of the cockpit, clear of the feet.

Timber grab rails, Laser-style traveller and block and toe straps, jib leads, are about all you will see on the clean-lined, uncomplicated Laser II on the showroom floor.

For this basic version, kits will be



HOW THEY COMPARE

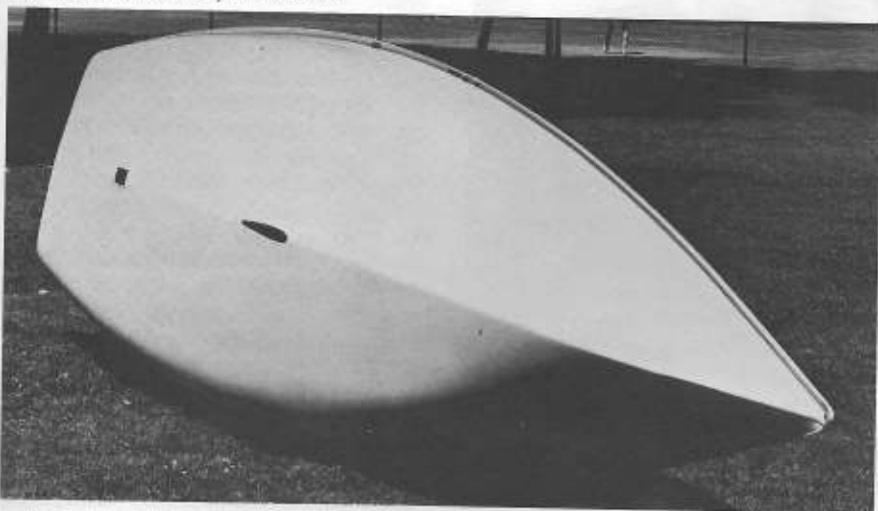
Laser	13ft 10½in	4ft 6in	14in	76 sq ft	130 lb
Laser II	14ft 5in	4ft 8in	20in	125 sq ft (approx)	150 lb
Tasar	14ft 11in	5ft 9in	24in	123 sq ft	150 lb

available to add spinnaker gear, trapezes, and adjustment for the main-sheet traveller to turn the boat into a racer.

"From day one," said Bruce, "We knew the selling price would determine how successful the boat would be. It will be below \$2000 Australian (for the basic version)."

Bruce said that although all optional packages would be available from the dealers, class rules would not be as rigid as they are for the Laser. They would be modelled instead on the Tasar rules that allow fittings to be replaced or varied providing none of their functions is varied or extended.

The hull is flat, virtually hard-chine.



Phil Maloney of Pamcraft, Sydney, is building the master plugs of the Laser II hull for Performance Sailcraft factories throughout the world. Centreboards and rudders are to be made in the UK, of fibreglass/foam.

My sail in the Laser II was in a puffy, 10-12 knot southerly on Middle Harbor. We rigged both of the 'glass prototypes; quickly and easily. The main goes up on an internal wire halyard with a rope tail and the jib on a wire external halyard that locks off at the hounds, with wire tail.

Firstly, the two boats sailed around for the photos. Ian Bruce, who is over 13 stone, with a 12½ stone crewman were able to plane to windward at times with the crewman on the wire. Frank Bethwaite, with a lightweight 100 lb NS 14 crew, Sue McFarlane, for a combined weight of 275lb had to work hard in the puffs but was able to keep the boat on its feet upwind. Downwind, both boats planed easily and safely under the spinnaker of about 120 sq ft.

I then sailed with Bruce's crewman (combined weight 343 lb).

And, although we were certainly too heavy to get the very best out of the boat, it was an exhilarating sail.

To windward, the boat is remarkably easy to handle. It is beautifully balanced and you can point it just about wherever you want to go from feathering to off the wind slightly to gather speed and jump onto the plane.

The angled flats on the inwale and cockpit depth were just right for slipping inboard and outboard to keep the boat at the correct angle of heel. And a very distinct non-skid pattern on the deck ensured once you were out on the gunwale you stayed there.

The toe straps were well positioned, although it was a little awkward to pick them up with the feet. One piece of shock cord can fix that.

Downwind, under shy spinnaker searching for speed, through clumsiness we wiped out a couple of times in broaches. But we did not capsize. This boat is very forgiving, even to middle-aged fools.

I really came ashore feeling this sail test had been more fun than work; quite surprised that a couple of largish adults had been able to get so much out of such a little boat.

Ian Bruce is already translating that sensation into selling words: "I think we have here the biggest small boat in the world," he said, "And I think I will work that into our whole advertising campaign."