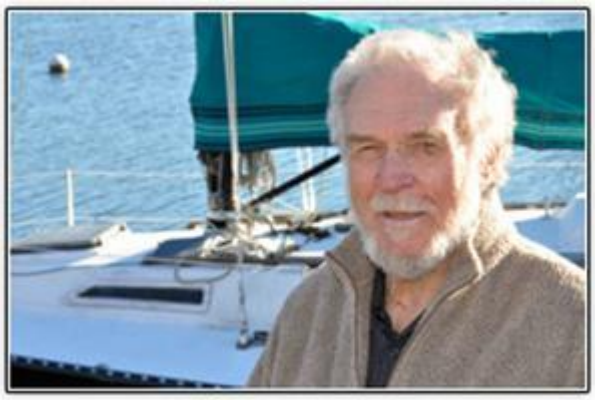
Bruce Kirby recounts the birth of the Laser

'Medal race - Laser Radial. London Olympics 2012' Carlo Borlenghi/FIV - copyright

87-year-old Bruce Kirby, the designer of the most popular sailing boat in history has penned this piece on the early years of the Laser dinghy, after the death of the builder Ian Bruce. Reading this article one recalls that Kirby was a darn good sailing journalist as well as being a darn good designer.



Bruce Kirby - Bruce Kirby

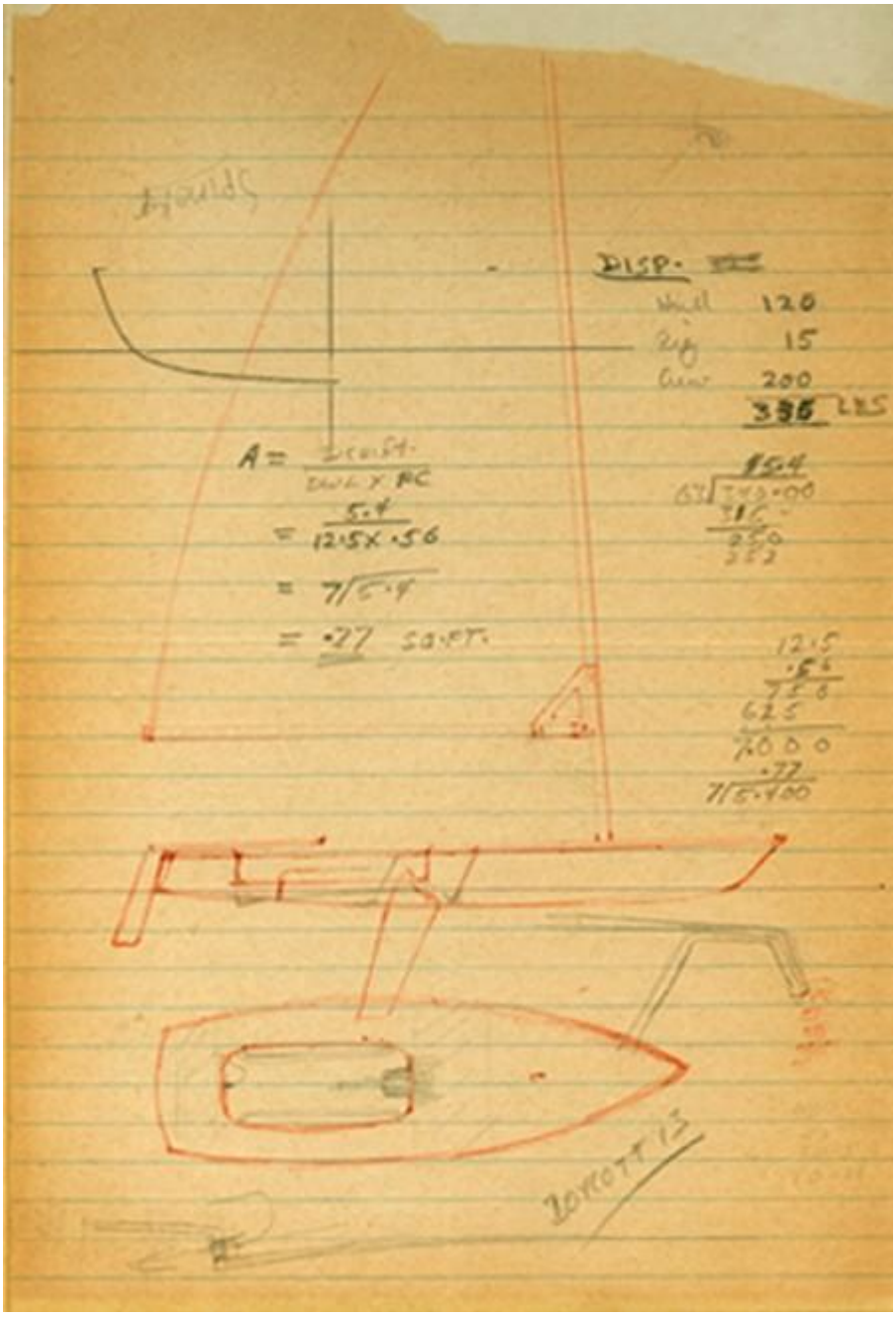
The long story of the wee yacht that became the Laser began when an marketing offshoot of Canada's Hudson Bay Company asked Ian Bruce, a Montreal product developer at the time, to come up with proposals for a line of outdoor sporting equipment.

Among the proposals listed as a "maybe" was a cartopper sailboat. As Ian had been building and racing my Mark III International 14 and was familiar with my earlier 14s, he called from Montreal and asked me to come up with the design of a cartopper.

This was early October of 1969 and I was still editor of the old One-Design and Offshore

Yachtsman magazine (now called Sailing World) and our office had just been moved from Chicago to Stamford, Ct.

Ian had been told by his client that the sailboat might never become part of the package, but as we talked on the phone I was doodling ideas on a yellow legal pad. The tear sheet from this pad later became what we called the "million dollar doodle." Off the phone I did some quick calculations for the little boat. I believe this sketch was the reason why so many people to this day say the boat was designed on the back of an envelope or on a restaurant napkin.



Laser designer Bruce Kirby's famous first rough sketch - note not a paper napkin - Bruce Kirby

Not so. I took the sketch with its rough calculations home to my office drawing board and over the next few days developed it into a full set of lines in the normal naval architectural

manner. The scale was one inch to the foot. Then I did a table of offsets for the hull so it could be drawn full size on the builder's floor; and after that came a single drawing which included the sailplan, deck, cockpit, daggerboard and rudder drawings. I have recently had all this work digitized for later publication

The plans went off to Ian with a note suggesting that "if your clients don't want to build the boat be sure to hang onto the drawings because it might make us a buck some day."

And it turned out that the client soon scrubbed the sailboat idea. So the drawing remained in Ian's drawer for several months. The big break came when the advertising manager of our magazine came up with an idea for a small boat regatta for new or almost new products. Monohulls were to be priced below $1,000 and multihulls under $1,200. What a perfect way to introduce the new boat !

It was now April of 1970 and I called Ian to ask him if he could possibly build a prototype of the cartopper in time for the October regatta. Ever the optimist he jumped at the idea and said he would build two boats to tune them against each other.

In the end he managed against all odds to finish one hull and pry it out of the mold a little earlier than it should have been "popped." But it held its shape in spite of the premature birth. Meanwhile he had sent the sailplan to Hans Fogh in Toronto so he could come up with a trial sail. On midday Friday before the weekend event he left Montreal with hull, mast, daggerboard, rudder and tiller and headed west to pick up Hans and the sail in Toronto. On they drove through the night arriving at the Playboy club after midnight. I flew in from LaGuardia on Friday and on Saturday morning the three of us put the boat together for the first time.

For want of a better name we had been calling the boat the Weekender and Hans had put TGIF on the sail. Hans was the designated helmsman and in the first race he finished second in light air to an adaptation of the Flying Junior dinghy with the sheer lowered and a stayed cat rig. The boat had been in production for three years.

Hans was not happy with the sail/mast combination and took the sail to Buddy Melges' nearby loft and recut the luff curve that evening. Next day with the sail looking great he won the first race and the regatta was called for lack of wind during the second race with Hans well in the lead.

With the few puffs of decent wind that he had experienced, Hans detected a bit too much weather helm. I took the boat for a short spin and found enough wind to confirm his opinion.

But the boat had kicked up a fuss on the Playboy beach and there were requests for dealerships and individual sales. But we knew we had work to do and the boat, which Ian had made a pale purple with a pink deck for the sole purpose of attracting attention, was cartopped back to his Pointe Claire shop 20 miles west of Montreal.
There followed a month of non-stop work for Ian, deciding on final fitting locations , vang type (I had drawn the vang above the boom as we see frequently today, but either to save time or to avoid experimenting with something entirely new, he rigged it the way that is so familiar to us all today.

With the winter boat show season looming we had no time to fritter away.

We needed a boat that was simple and easy to sail and handle ashore and afloat. I re-did my calculations for helm balance and realized that because the boat should be easy to keep flat upwind I would not need to put the center of effort of the sailplan very far forward of the center of lateral resistance of the underbody. This just didn't work and when I moved the sailplan forward on paper to give it the normal "lead" over the underwater shape everything came into focus.

Working with Hans we achieved this by shortening the foot of the sail six inches, lengthening the luff a foot and taking several degrees of aft rake out of the mast. The sail area remained the same as on the original drawing. The mast step was moved three inches forward but the center of effort was seven inches forward - quite a lot in so small a boat. All this was done on paper and so was still somewhat theoretical. I Fed EXed successive drawings to Hans (no e-mail or FAX at the time) and then phoned the new numbers to Ian so he could prepare the prototypes for the new setup. He had built a second prototype with a moveable mast step to accommodate the development.

So the heavy lifting fell upon Ian, as it does at this stage in the development of any sailboat. As we would say today, "that's what builders do !"

He did the physical work in the shop with one helper and then conducted testing on the water at Royal St. Lawrence Yacht Club. He had two or three assistant test pilots of differing heights and weights, including Janet Bjorn, one of the better woman sailors (and skiers) in Canada.

We had a final weekend of testing early in December of '70 and pinned down all the details. Hans and I sailed the boat for the first time since the America's Teacup and the weather cooperated with nice medium air the first day and a few hours of sleet and 20 knots the next.

We all agreed the boat was ready for the market. And that evening at a celebration at RStLYC a young McGill University science student named Doug Balfour suggested the name Laser, pointing out that it was well known to young folks , that it was truly international, and that the great Laser beam logo would only have to go on one side of the sail because it was symmetrical.

Just after Christmas Ian delivered the first legal Laser to me in Connecticut.

Of the two prototypes the first one, that had been sailed at the Teacup was much too light at 109 pounds and would not have lasted long in a blow.

The second, with the moveable mast step was also under target weight and of course had a deck marred by the weird mast step.

My boat was right on the 130 pound hull weight we wanted. It was bright red/orange and saw a tremendous amount of action that winter as I took is to the many frostbite fleets along the Connecticut coast to show it off.

I'm happy to say it turned a lot of heads and precipitated a lot of questions.

After a career of hard racing and rough use by many curious and possible buyers that boat

was donated to the Mystic Maritime Museum many years ago. It was the second non-wooden vessel in this incredible nautical showplace. By the time it left my hands the sheen had come off the gelcoat and for the last few regattas I entered I listed the colour as “awful orange.”

Ian then got a got a boat into the New York Boat Show in early January of 1971. It really did take the show by storm He sold 144 boats to individuals and dealers, which I believe is still a record for the event.

Apart from the hard work Ian had done in preparing the boat for production I believe his greatest contribution in those early years was in ramping up production in an unbelievably short time. He must have worked day and night.

In a few weeks he was turning out 10 boats a day and that increased to 20 the second year. He set up a building facility in England in early 1972 under direction of Paul Davies, an International 14 and Flying Dutchman crew, whom we had both known through 14 sailing.

Then came a facility in Ireland which was a tax haven at the time and that plant was able to help the U.K. facility fill the tremendous demand then coming from Europe.

Ian and Don Trask, a San Francisco Starboat champion teamed up to open a factory in California to cut down on the shipping costs between Montreal and the burgeoning Laser market in the U.S. west. Don already had a small shop producing Stars.

As the designer my job had been done long before but I stayed close to the program to help with marketing in any way I could. For two years the boat was advertised only in our magazine, fully paid for, by the way.

I wrote and produced the ads with the magazine’s art director until Ian had hired a great graphics man who turned out all the printed publicity from then on.

Ian Bruce -

After an unfortunate insolvency many years later Ian lost the building rights and I was able to make arrangements for production to move from Canada to the Pearson Corporation in Rhode Island.

As a native born Canadian I was sorry to have to approve this move, but I had tried to find a Canadian builder whom I thought could handle the very high production then required.

It’s been a long road, with a lot of hills and potholes, but the wee yacht has continued to prosper through grey skies and blue. Ian is gone but his legacy of ferociously hard work, tenacity and creativity lives on. There are now more than 2000,000 Lasers in 114 countries. I keep the “million dollar” sketch on the office wall to remind me that acorns frequently become wonderful oak trees.

by Bruce Kirby