

Smokin' Coyote



By Ivor Wilkins

Elliott's racing plans for Kiwi Coyote begin with the Pacific Cup race from San Francisco to Hawaii starting in July. Robin and Des Stewart have chartered the boat for the race, which they will tackle with a crew of eight.

This will include the Elliott brothers, Greg and Bruce, Stu Clark, Richard Bearda, Graig Smith and Don West.

After that the boat will return to Auckland for some local racing before heading to Australia to take on the trans Tasman cousins in events up and down the eastern seaboard, possibly including the next Sydney to Hobart race.

"At present, all our attention is focused on the Pacific Cup," said Elliott. "We will start putting a campaign together after that is over."



Auckland designer Greg Elliott's attitude to rating rules is refreshingly simple. He finds them stifling and reckons that most of the constrictions written into rules make the boat go slower. "Whenever you come up with a rating rule, just do the opposite and you're bound to be fast," he says.

Fast is what he wants to be and his latest machine demonstrated exactly that when it topped 20 knots downwind on its first outing on a rain-lashed Waitemata Harbour. With the bow straining upwards under the pull of a gennaker and spray flying from the gunwales, the yacht tracked along deadly straight, like a guided missile.

Even the wake of a large powerboat crossing directly across its path could not unsettle it. It just flew on regardless.

Elliott's well-known dislike for the type-forming constraints of the IOR and the IMS rules has made him something of a rebel with a cause. But, he does not rail against the establishment, or fight for change. He simply operates outside of it and has a lot of fun in the process.

And, over the years, he has attracted a strong following, both in New Zealand and internationally. Increasingly, he is finding a market for his fast cruising yachts, because owners recognise in them the quality Elliott has always strived to achieve: fast passagemaking in offshore conditions.

His penchant for muscular yachts with aggressive plumb bows, narrow waterlines and powerful rigs has created a style that is quite distinct. You can usually tell an Elliott yacht at a glance. Taken to the racing edge of this style, he has produced some quite striking yachts, particularly his 50ft wing-masted schooner Elliott Marine which set a new Round

North Island record, blitzed the fleet in the Transpac and narrowly missed line honours in the Melbourne-Osaka race.

This latest racer, Kiwi Coyote, comes straight out of the same lineage. This is his own boat and it reflects his philosophy, which he sums up as follows: "It is all about drag reduction and weight reduction. Reduce drag and weight as much as possible, combine that with a reasonable amount of power in the rig and you are out of here. Simple as that."

Often simplicity is deceptive - a great deal of thought and experience usually lie behind truly simple design. This is evident in Elliott's new boat, which utilises a great deal of research and development and forms part of an ongoing process of research and development. Like Elliott Marine, this boat forms a testbed for a number of Elliott ideas and developments, which are then refined and utilised in future projects.



In overall looks, the yacht bears similarities to the solo round the world yacht racers, although the flare at the beam is slightly less exaggerated because the Elliott boat does not utilise water ballast. The hull form is very similar to Elliott Marine, although it is marginally finer - the beam to length ratio is reduced - and the underwater shape is somewhat flatter aft of the keel. Both of these characteristics are a result of the single rig configuration, compared with the schooner set-up on Elliott Marine.

The mast is a carbon-fibre wing with a chord width of 450mm. The tube was manufactured by Southern Spars and then the finishing work was done by Greg's brother Bruce. Apart from the wing structure itself, a distinctive feature is the wide swinging spreaders. These allow the mast to rotate within the shrouds, which are necessarily slack with the boat at rest, but take up the tension on the windward side when the rig is powered up.

"The mast can rotate to 90°" says Elliott, "but in practice 60° is as far as you ever want to go. Upwind, you pull that back to 6°. Anything more than that sets up too much drag-"

Elliott has the benefit of three years' experience with the rotating rigs in Elliott Marine, plus extensive testing with a scale model in the Auckland University wind tunnel. "Our

test results from the tunnel correlate very closely with what we know to be accurate from experience on the previous boat:' he says.

The other aspect about the rig that is quite striking is how far back in the boat it is placed - more than halfway back from the bow, which suggests the keel is also well back.

Elliott confirms this: "Putting the centre of effort further back promotes faster reaching and running," he says. "That is combined with a hull shape that is quite deeply veed, like a powerboat. The faster the boat goes, the more it lifts out of the water."

Out in front, a 2.5m bowsprit reaffirms that Elliott belief in gennakers remains undimmed. He has worked very closely with North Sails on developing gennaker programmes and says, "if your boat is fast enough, it is a gennaker boat - it's as simple as that".

The bowsprit is able to articulate to assist in sailing deeper angles. Some races do not allow moving bowsprits, so provision is made to lock it in place as well.

In keeping with the low drag philosophy, the hull is narrow at the waterline, with the knuckle of the bow lifting clear of the water at rest. And, in keeping with the lightweight philosophy, there is virtually nothing to it apart from the skin of the hull. With a displacement of six tonnes on a 43ft boat, there is no arguing with Elliott's statement that "this is unashamedly what I would call a racing boat".

Working closely with composite engineers High Modulus and by using more carbon fibre and higher performance materials all round, Kiwi Coyote is lighter relative to its length than Elliott Marine. But, Elliott is also a believer in strength and reliability, so he has sometimes compromised lightness for a bit more peace of mind. For example, the outer skin of the hull is kevlar, not carbon fibre, for greater impact resistance. Similarly, Elliott has chosen a foam core, giving away about 7kg in total weight over the lightest possible core, but lie is comfortable with the decision.



Down below, it is all wide open spaces with a bulk-head at the mast and another at the companionway. Four pipe berths on either side and a motorbike-type saddle at the nav station is all you get in terms of creature comforts.

The nav station is situated just aft of the mast, with a large B&G screen set so that the helmsmen can view it at night.

The rotating mast introduces all kinds of wrinkles that have to be sorted out: for example, you can't have performance readouts on the usual pod at the base of the mast, because half the time they would slide round the corner out of sight. So the read-outs are mounted in a fixed console just forward of a hatch above the nav station. That way, the helmsman can see them, as can the navigator by peering up through the hatch. Similarly, all the masthead instruments have to be calibrated to take account of the mast rotation - everyday stuff for offshore multihull sailors but novel for people more used to fixed rigs on monohulls. Like the navigation station, the logical place for the head would also have been on the centreline, ahead of the forward bulkhead. But that would have interfered with sail handling, so the head is on the starboard side of the forward cavity. Heaven help you if you've got to go while the boat is beating or blast reaching in a seaway on starboard tack - you'd be perched on the high side with nothing but determination and fear of your shipmates' fury to keep you from falling off. Auxiliary power comes from a 30hp Yanmar diesel, which propels the boat at more than 8 knots, testament to its light weight and slippery shape. Under sail, the performance is even more impressive. Initial trials were in light conditions, about 8 knots of breeze, which had the boat approaching windspeed upwind and exceeding it down. The second sail, in blustery conditions with regular squalls tracking across Auckland, confirmed that it lights up in a breeze. With its powerful rig balanced by a deep fin and bulb keel, this boat is no slouch upwind - doing 8.2 knots at close angles in 22 knots of true wind and choppy conditions. But reaching and running it takes off, with the big sailplan forward lifting the bow and sending the rev counter needle into the red. The stability at speed is almost uncanny. With the log hitting 20 knots, there was plenty of adrenaline, but not the slightest sense of panic, or lack of control,

Even though he knows talk is a dangerous thing, Elliott can't help himself - "It's a bullet," he says.

As he gets older, his attitudes to yachting remain unchanged. Go fast is what he wants and that's, what this boat is all about. While convention would have him at least starting to ease back and consider sensible retirement options, Elliott has never had much time for convention. "Retirement plans," he scoffs. "They're like rating rules. Do the opposite, and you'll get on just fine." As his boat shifts restlessly even in the glass-calm marina, he laughs. "Let the good times roll."

There is an inescapable sense that with this boat, the good times will roll very quickly indeed.

Specifications:

LOA 14m

LWL 12.8m

Beam 4.1m

Draft 3.5m

Disp. 6 tonne