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Race Around the Globe!



Earthrace

Do you still dare to dream? When you were younger and less enlightened, free from the shackles of reality and unguided by experience, dreams ran rampant. Wild childhood dreams about overcoming obstacles, slaying foes, getting the girl and being invincible. Do you remember those visions and thoughts? Hopefully time and family responsibilities haven't locked you into such confinement that you no longer dream of stepping outside of your comfort zone to take a risk...a risk that might fulfill your dreams or end in failure. After all, what would triumph be without the risk of failure?

These days, people that live their dreams often make media headlines as the rest of us mere mortals simple stare in amazement wishing it was us at the other end of the camera. We love to watch as someone else takes up a challenge that we view through the eye of skepticism. Offshore racers capture our attention as we watch them living their dream, putting their lives on the line for the ultimate thrill during every race. Dreamchasers are a rare breed and very entertaining to watch from the sidelines as they set a course to uncharted waters in search of greatness, or as some would say Mana.

The level of notoriety that comes to a Dreamchaser is relative to the enormity of the event. Living a dream might be as simple as whitewater rafting on the Snake River or driving up Pike's Peak. The event could also be far more complex, like climbing to the top of Everest or setting the Round the World Speed Record. This article is about the latter, a man living his dream to set a record that will stand in the UIM record books...until someone else does it faster.

Meet Kiwi Pete Bethune, Dreamchaser extraordinaire and Skipper of Earthrace, the next team to attempt the longest offshore boat race on the planet. EBM recently met up with Pete and Earthrace in New York.

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- Project** Earthrace
- Skipper** Pete Bethune
- Goal** Set the World Record for Circumnavigating the Globe
- Distance** 24,382-miles
- Start Date** Spring 2007 [Barbados]
- Vessel** Purpose-built 78 ft Vee-Bottom with outriggers
- Propulsion** Bio-Diesel powered 540 hp Cummins engines
- Top Speed** 40 knots/hr
- Weight** 14 tons empty, 26 tons loaded (with fuel and supplies)
- Range** 14,000 miles @ 7 knots (That's over halfway around the Globe!)
- Current Record** 75 Days, set in 1998 by Captain Ian Bosworth
- Target Time** 60 Days, which provides a buffer in case of delay



WAVE PIERCING

The hull is designed to go 'through' the big ocean waves, rather than up and over - which makes for a much smoother ride.



Earthrace is a race boat...

...built for a single purpose to set the UIM record for "Class – Long Distance Offshore – Round the World." The current record holder is Captain Ian Bosworth, who completed the 24,382-mile voyage in just seventy-five days, which began on April 19th 1998. Since that time several other attempts have been made on the Round the World record but all failed to finish allowing the record to stand fast and wait for another frontal assault...and here it comes.

EBM met Pete and his crew beneath the ghosted shadows of the World Trade Center while Earthrace was moored in the North Cove Marina in lower Manhattan for a three-day layover. Seeing Earthrace against the backdrop of skyscrapers contrasted like an Alien spaceship that had landed in a cornfield. It takes a lot to make New Yorkers stop and stare, Earthrace is now on that short list. Sitting at the end of the dock like a puppy hunched up in the back and ready to romp, it was clear this was no ordinary boat. In fact I'm still not sure if it's a boat or a submarine floating on the surface.

Onboard Earthrace is very cramped. A single watertight door allows for entry from the stern and a single hatch near the bow is all that provides for ventilation and escape. Once inside, standing on top of the massive fuel tank, the head is immediate to starboard, then galley to port and workshop across the narrow aisle. Next we pass through a bulkhead and enter the cockpit with two form-fitting Recaro seats at the helm. It takes a squeeze to get between the seats then down two steps in the narrow bow section that has four hanging berths/hammocks. The interior is completely spartan, the only upholstery is on the Recaros and that's not much. The rest of the décor is black carbon fiber as a reminder that this is a race boat, built for speed, not comfort.

Interview with Pete Bethune, Earthrace

Who had the idea for Earthrace? It's my brainchild, I saw some video of a military vessel that used a wave piercing hull and thought it was the way to go in very rough conditions. The bow has minimal lift so the bow tends to pierce through the waves rather than ride over them. It's a much smoother ride for the crew because the bow isn't constantly lifting and slamming down, but you better have some real strong windshield because it's a really wet ride and I mean really wet. Sometimes a periscope would be nice to have too.

During my investigation into wave piercing hulls I stumbled onto the UIM site that keeps a log of all sorts of water speed records, but the one that stuck in my mind was the one for circumnavigating the globe. The record stands at seventy-five days. A lot of boats have attempted to beat this record, especially over the last few years but they don't finish. It's a long ride and anything can go wrong, and it usually does. It's not about going fast, it's about finishing.

Who designed this boat? I went to this Kiwi guy Craig Loomes and showed him my idea for a wave piercing hull, but we didn't know if it would work so we built a twenty two foot prototype and it wasn't exactly right so we spent some time cutting it up and making changes until it worked like we wanted it to. From there we scaled it up and built this one.

Who put up the money to make Earthrace a reality? I've got about \$1.5 mil (US) in it from my own pocket and I have sponsors and creditors that have put in the other 1.5 mil. South Canterbury Finance has been a big part of our development but we also got some help with free hardware like the engines and ZF transmissions as a way for Cummings/Mercruiser and ZF to sponsor our endeavor.



On a full tank of fuel, at seven knots, we could go fourteen thousand miles on a single tank of fuel. That's halfway around the world...

Earthrace Skipper Pete Bethune

So how long have you been away from your work?

This is my job now. I sold my shares in my company to put this boat in the water. This is my job, it doesn't pay anything but I'm working on something that I believe in and to a degree I'm living the dream. I firmly believe in Bio Fuels and they need to become part of the transportation energy mix. I hope this boat and project can contribute positively toward that. For the record, I don't give a shit if we break the record or not, as long as it brings attention to this boat and the Bio Fuel message, then we've done our job.

How do you fund the ongoing voyage? We take sponsors for rides. You can pay for a leg of the voyage, the amount depends on the distance of the leg, from \$1000 to \$15,000 and you better be skinny, there's not much room as you can see. We run with a crew of four so there are five on board with an extra crewmember.

What are the specs? It seventy-eight foot long, twenty-eight foot beam. It weighs fourteen tons empty and twenty-six tons fully loaded with 2500 gallons of fuel and supplies. It needs about four feet of depth to clear the props when we're fully loaded.

I noticed a fire axe downstairs by the fishing poles, how's the fishing and what's the axe for? We've had some great luck catching fish. We'll troll a few lines whenever we're going at idle speeds. We've had some

terrific meals while at sea. The axe on the other hand we hope not to use. If this boat were to flip over, it's totally water tight so it wouldn't sink but there's also no way out. So if you need to make a way out, there's the axe. Just make sure the hole is big enough to get the life raft out too.

How fast will this boat go? We've seen 40 knots from these 540 hp engines. We spin them up to three thousand RPMs when we run at full speed. We normally burn fifteen gallons per hour while running twenty knots or twenty-five miles per hour. On a full tank of fuel, at seven knots, we could go fourteen thousand miles on a single tank of fuel. That's halfway around the world.

Does this boat have lift and come up on plane? Not really, there's very little difference between displacement and planeing. The only thing that provides lift are the rear outriggers. When the seas are big, you want to maintain as fast a speed as possible, this makes the hull more stable and it's less likely to topple over.

It looks like it would be loud in here. There's nothing to absorb the sound. We wear ear protection at all times while we're running. It's really loud in here, the sound just echoes around. It averages about 85 db at cruise speed. We'd go deaf in a few weeks without the ear protection. It's just a carbon shell, so there's no place for the sound to go.

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CUSTOM DESIGN
Earthrace was built for stability and performance in the big open oceans - comfort and sound suppression was secondary...

Earthrace BIODIESEL



NOSE DIVE

While recreational boats are designed to keep the nose out of the water, Earthrace is designed to keep let the nose slice thru it.

How can you make all these stops if you on a race around the globe? The actual race doesn't start until April or May of 2007, until then we're just giving her a very long shakedown cruise. We started in New Zealand, now we're in New York, Philadelphia is our next stop. We'll go all the way up the Mississippi before heading to the Miami Boat show before turning south to the start of the race. The race starts and finishes in Barbados and we'll have a very exact course to follow. The only rule is that you can't refuel at sea. All fueling must be done at the dock. The current record is seventy-five days. We'll run at a pace of sixty days, so we'll have some time to make repairs if needed, as long as it stays right side up and running we should have the record.

What is the tie into the bio diesel fuels? The record is a means to an end, it will get this boat some attention—we call it "Mana" in New Zealand, you call it notoriety. I worked for years as an oil exploration engineer in the North Sea. I've become very aware about how much fossil fuel we have left, about 40 or 50 years worth. In 2003 I did an MBA thesis on Bio Diesel fuel and after doing the research, I believe bio diesel fuel is the most suitable alternative fuel plus it's renewable and can be blended into existing fuels. These Cummings/Mercruiser engines weren't altered at all and they have just over 2000 hours on them running on 100% Bio Diesel from multiple sources. Only in the coldest climates do we mix in 20% typical diesel fuel.

Where does Bio Diesel come from? It's normally made from vegetable oil and there are three hundred different crops that can make fuel. In the states most of yours come from Soy Bean Oil, but you can make it from Coconut oil, Palm oil or Canola oil, even animal fats. In New Zealand we can cut our need for fuel by six percent by just turning the animal fat from what we already process into fuel. Today we just throw it away. Restaurants are finding a way to sell their used Wesson cooking oil to fuel companies. Then the fuel companies refine it and sell it at the pump. We aim to bring as much attention as possible to the application of Bio Diesel fuels. Winning the record will help to do that.

What happens after the record run? We come back to New York for a bit of a refit, then we go on a five-month tour of forty cities across Europe and Asia. It will be 2008 before this boat returns to New Zealand and ends up in a Maritime Museum.

And then what will you do? I have no idea what I'm going to do after this. I've picked up some valuable skills along the way, it will be time to spend some time with my family. My wife is at home in New Zealand raising our two young kids and trying to pay our mortgage. We've sacrificed a lot, I'm not complaining, it's part of the game and it's allowed us to be in this position, but it's tough right now. The crew sort of lives day to day as we do our promotional tour throughout the east coast and Mississippi delta before heading south to Barbados for the start of the race.

Who's on your crew? My crew consists of some really dedicated people. Torsten Sandmark, Michael Schubert, John Allen, Devann Yata, Ryan Heron and Matt Stein. John, Ryan and Matt do most of their work for the project from land. They set up all our logistics and coordinate the media appointments. Hopefully that will be our biggest challenge after the race is over.

What final message would you like to leave with our readers? Bio Diesel Fuel is going to become part of the transportation energy mix and it needs Americans to support it. You can track our progress around the globe at www.earthrace.net.

EBM WOULD LIKE TO THANK THE CREW OF EARTHTRACE FOR A TOUR OF THE BOAT AND A GLIMPSE INTO SOMEONE'S DREAM. WE WISH THEM CONTINUED SUCCESS ON THEIR JOURNEY TO CIRCUMNAVIGATE THE GLOBE IN RECORD TIME. WE LOOK FORWARD TO SEEING THEM IN THE WINNER'S CIRCLE SOMETIME EARLY NEXT SUMMER. PS — GIVE US A CALL IF YOU ARE LIVING YOUR EXTREME BOATING DREAM AND NEED SOME MANA.