

Solar-car inventor pursues distance record alone, with empty pockets

March 4 2009, By Patrick May

From stem to stern across the continent, skirting blacktop and blue highway in his oddball little electric car, Marcelo da Luz has devoted the last eight months of his life to following the sun.

It keeps him going. It powers the silicon cells covering his three-wheeled roadster like a rattlesnake skin, bringing his record-breaking quest this week to Palo Alto, Calif., where he's taking a break. And it fuels his solar evangelism, sharing with a fossil-fueled world his passion for sun power.

After three seasons on a drive to set the world's distance record, this addiction to sunlight has turned da Luz into a daydreamy vagabond - over his head in debt, at the mercy of strangers, dependent on the 26 lithium-ion batteries pushing him through a world governed by serendipity.

"I've got no wife, no kids - only a cat, and she probably doesn't remember me anymore," da Luz, 40, said the other day, waiting out the rain at a friend's place in Palo Alto. "I lost my girlfriend and my job because of this crazy passion. It's bizarre, but this journey has become everything for me."

The vehicle seems as unlikely as its creator, a Brazilian-born former flight attendant with no scientific or engineering experience. His car's flattened fiberglass sheath, floating less than three feet off the ground, has turned heads from Toronto to Vancouver, Canada, and the Golden

Gate Bridge. Residents in one Alaska town called the police to report a UFO rolling through their neighborhood.

"He's like a magnet," said John Schaefer, 71, a renewable energy consultant who met da Luz in Arcata, Calif., three weeks ago and volunteered to follow him to the Bay Area in the support van.

"Everywhere he goes, people come together around him and his car." When it broke down in the small northern California town of Redway, "a bunch of residents picked the thing up and carried it to the KMUD radio station's parking lot where Marcelo got it going again."

But the car he calls "XOF1" - or the power of one - is more than just a 13-foot-long, 470-pound oddity quietly rolling down North America's back roads. It's the manifestation of a vision da Luz first had watching television in his native Sao Paulo back in 1987. Mesmerized by the sci-fi solar-cars racing in the inaugural World Solar Challenge through the Australian Outback, da Luz said "a light bulb went off for me. I thought those cars were so futuristic and so positive for the world. It was as if I'd seen the future."

Solar made sense. But, said da Luz, "I was not particularly scientific, I had no means to build such a thing, I'm a nobody - so I left the idea on the back burner."

After moving in 1990 to Canada, the dream refused to die. Solar-powered cars were already out there, but he would build his own from scratch, take it on the road, push it into the record books, and spread the solar gospel at schools and campgrounds along the way.

"We are all hypocrites," said da Luz, "waiting for our governments to save the planet, but we need to start doing it ourselves. This would be my way of doing my share for the environment and hopefully inspiring others to do the same."

Before long, the idea of building a solar-powered car became an obsession. "My roommate was an engineer, and he calculated it would take 50,000 hours to build such a car. He told me, 'For one person working 40 hours a week that would be 25 years. Good luck, Marcelo!' "

But instead of giving up, da Luz dove in.

"Everything we do in life is based on pain or pleasure," he said as the rain fell outside for hours. "The pain of not following my dream became unbearable."

He went to Australia to see the cars first-hand. He reached out to academics and the electric-car community for guidance, often being brushed off. "I've knocked on 1,300 doors for help," he said, "and most of the time I've been turned down." He got mechanical help from students and teachers at a college in Toronto - along with a whole cast of characters listed on his Web site at www.xof1.com .

And he was off. "The point of no return," said da Luz, "was when people said they believed in me."

He did a rough sketch. A friend helped with a computer design. Over time, da Luz's vision went from a shaved block of foam to the electric-motor-driven model running on what he called "bottled sunshine." The test drive was conducted March 13, 2005, on a frozen lake in Ontario, said da Luz, because Ontario authorities refused to issue him a road permit.

"I spent two years planning it, two-and-a-half years building it, then two more years fighting the government," he said. "I froze my butt off the day I test-drove it, but it was the happiest day of my life."

His campaign was thwarted at every turn. Sponsorship deals fell through.

He was laid off from his airline job in part, he said, because he was spending too much time on the car. Frustrated that he couldn't operate legally on Ontario roads, da Luz finally had to transport the car by air to Barbados, which agreed to register the vehicle as long as da Luz himself became a resident.

"I had no money, so I refinanced my house," he said. "I had only three years left on the mortgage. Now it's 25 years." He estimates he has spent about \$500,000 on the project so far, including thousands of hours of his own time.

Unable to land cash sponsors, da Luz set out on his own last June to break the world's distance record for a solar vehicle - 9,364 miles, set in 2004 by a team of fellow Canadians. With the help of volunteers following him in a support van and trailer, da Luz cut across the northeastern United States to avoid Ontario's roads, then re-entered Canada at Manitoba and traveled north to the Arctic Circle, driving back roads at 45 mph, getting stuck in places for weeks because there was no sun, prompting befuddled looks and police stops along the way.

This week, he sits in Palo Alto, waiting out the on-and-off rain for the sunshine that he and his car so desperately need. He says he has logged more than 12,000 miles, and he's not done yet. He talks about going all the way to Argentina, if he could just scrape together the money for a small crew.

But for the moment, da Luz is essentially broke and has nothing planned beyond a stop next week in Los Angeles. After that, everything's up in the air, up there with the sunshine and the blue-sky dreams that put him on the road in the first place.

*(c) 2009, San Jose Mercury News (San Jose, Calif.).
Visit MercuryNews.com, the World Wide Web site of the Mercury News,
at www.mercurynews.com
Distributed by McClatchy-Tribune Information Services.*

Citation: Solar-car inventor pursues distance record alone, with empty pockets (2009, March 4)
retrieved 25 April 2024 from
<https://phys.org/news/2009-03-solar-car-inventor-pursues-distance-pockets.html>

This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.