

## FROM THE FRONT PAGE

## FAMILY From front page

That will be the only the first half of their quest to “figure-eight” the continents of North and South America. They’ll take the Panama Canal back to the Pacific, then south around Cape Horn to the Atlantic again, back through the canal and up the western coast of the North American continent.

The Schwoerers started their odyssey in Switzerland in 2000, climbing the highest peak in each department, or state, in their native country. All four of their children were born since then along the way — two in Patagonia, one in Darwin, Australia, and the fourth in Singapore. Their youngest will have 20,000 nautical miles under her belt by the time she turns 2 on Saturday.

On Tuesday, they sailed into Hilo’s Radio Bay from Panama after 50 straight days at sea with Salina, 7, Andri, 6, Noe, 3, and Alegra, still 1, and a pair of TOPtoTOP volunteers, Jacqui Hocking of Australia and Meret Tucker of Great Britain.

TOPtoTOP is the non-profit organization they founded to focus on the global risks of climate change, and connect people



HUNTER BISHOP/Tribune-Herald

The boat that the Schwoerer family travel in is moored Wednesday in Hilo.

to nature and sport based on sustainability. Dario’s blog entries from the expedition are posted at <http://expedition.toptotop.org/>.

Their expedition is supported primarily by Swiss Army knife makers Victorinox and SGS, an international inspection, testing and certification services company headquartered in Geneva. The Schwoerers also perform ocean research and test sailing equipment for other sponsors, including the International Pacific Research Center in Honolulu, which commissioned them to survey ocean debris.

Of course a trip like this can be filled with harrowing adventures. In 2005, they attempted to climb the

highest peak in Antarctica, but couldn’t get there due to the volume of packed ice in the sea. After turning back, their vessel hit a floating container and was seriously damaged. They made it to Patagonia, but there were no boat repair facilities that could get them back under sail. They were stuck for 18 months before they could get the materials and equipment needed to make their craft seaworthy again.

When Salina was born in Patagonia, Dario said he cut the umbilical cord with a Swiss Army knife. When that story reached the Swiss ambassador, the ambassador told his friend, who owns Victorinox, maker of the iconic, multipurpose tool, and they got their first major sponsor. The vessel’s

sails sport a giant image of a Swiss Army knife.

The single-masted, aluminum-hulled 50-foot sloop is “a fast-sailing vessel,” he said, powered almost entirely by sustainable energy — wind and solar. Named the “Pachamama,” the Inca word for Mother Earth — the sloop has 11 solar panels that provide 750 watts of electricity and two wind turbines that provide another 750 watts.

Dario, 44, said it’s the first time a vessel has circumvented the Americas this way.

“It’s only possible due to global warming,” he said. “Before, it wasn’t possible. It was ice.”

Now there’s a two-week window when Northwest Passage thaws just enough to make it through. But just in case, he’s equipped the vessel with large fuel containers that can keep the vessel’s passengers warm and lighted until the next spring thaw if it does get trapped in the ice.

So far they’ve conquered Mont Blanc in Europe, Aconcagua in South America, Mount Kosciuszko in Australia, Mount Everest in Asia, and Kilimanjaro in Africa. They’re on their way to climb Alaska’s Denali Peak,

and they plan to stop back in Antarctica for another crack at Mount Vinson, which would make their journey complete. They’ve also scaled Ecuador’s Chimborazo, the highest peak measured from the center of the Earth, which along with Everest, and Friday’s trek to the summit of Mauna Kea, would give them a trifecta of Earth’s tallest peaks.

They diverted from their figure-eight course around the Americas to make the Hawaii Island stop specifically to tackle Mauna Kea. Early Saturday morning, they’ll bicycle to the summit.

“We’re really keen to climb Mauna Kea,” he said. “It’s been a long-time dream.”

Hilo is the first U.S. port they’ve visited in their journeys. Dario said he knew they were in the right place when a rainbow greeted them in the Hilo harbor, a friendly George Valdez at Customs and Immigration greeted them with a smile and helpful advice. Valdez even called to alert the newspaper of their arrival.

Dario eagerly seeks school groups to speak to at each port along the way.

“Our goal is to inspire

the children not to give up, and to get a good relationship with nature. Then it’s logical they will also protect the environment.” The Schwoerers promised one another at the outset that they they would not quit on any aspect of their odyssey until they tried 20 times to get over the hurdle. They haven’t reached the 20th try yet. “Our purpose is to do something good,” he said.

Dario also asking for help from the community so that they can accomplish their goal of the entire family making it to the summit. They only had room on the sloop for two mountain bikes and the children’s trolleys had to be left behind. Anyone who could provide trolleys or pull-carts for the bicycles so the Schwoerers can pull the kids along on the climb, can contact Dario at 990-7152. And if someone could drive an escort vehicle for them on Saturday, they would appreciate that as well. Cyclists also are welcome to ride with them.

They expect that their journey will end in 2017 after 18 years of ocean adventures.

More information is available at [www.toptotop.org](http://www.toptotop.org).

## AUDIT From front page

Jamae Kawauchi handled the 2012 elections, resisted attempts by South Kona/Ka’u Councilwoman Brenda Ford to add the comparative language, but his attempts to shoot down her amendments, and then to withdraw the bill entirely, failed. He was also unsuccessful in getting the council to agree to an executive session about language in Ford’s amendment dealing with the elections warehouse and other issues.

Onishi said after the meeting he just wanted to know how much overtime

was incurred by staff from two other divisions of the Clerk’s Office who were called to work across the hall at the Elections Division to help get the work done.

“I wanted to find out how was the staff being paid,” Onishi said. “We didn’t need to look at past years because they’d never done that before.”

But Ford pushed for the comparison figures.

“That’s the only way you’ll know if something

really went awry is if you compare it to the years before,” she said. “I think

the public has been very clear that they want the truth. For good, for bad, for ugly, we’re going to get the hard numbers.”

Other council members agreed.

“I’m inclined to think having a comparison gives us a better metric,” said Puna Councilman Zendo Kern. “If we’re going to do it, we should do it right.”

Puna Councilman Greggor Ilagan agreed.

“I feel we do have the budget for it,” he said. “I think it’s important for the public to know what’s going on.”

The warehouse is a sticky issue with the county, as allegations of the former warehouse manager using the site to conduct his own sign-making and screen-printing business, as well as alcohol storage and post-election drinking parties there, precipitated the firing of four election workers, including the division chief.

That escalated into union grievance procedures reinstating the workers and defamation lawsuits against Kawauchi and former Council Chairman Dominic Yagong.

Kawauchi had a hard time managing a disgruntled staff, several of whom resisted her management and failed to show up on primary election day. That culminated with late poll openings, incorrectly programmed cellphones, drivers taking election materials to the wrong precincts and other problems. The problems got so bad, the state Elections Office took over the county’s general election.

Cory Harden, testifying before the decision, urged

the council to conduct a performance audit and get to the bottom of the election problems. If the county won’t do it and the state won’t do it, perhaps the federal government should step in, she said.

“We need to go way beyond a financial audit,” Harden said. “We need to know what happened. People need to have confidence in the conduct of our elections.”

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## MARS From front page

require some preparation, said 16-year-old junior Hannah Twigg-Smith.

The HI-SEAS mission is currently taking place in a small dome-shaped, closed-loop habitat in an abandoned quarry on a cinder cone ridge on the northern slope of Mauna Loa. In this barren, red landscape, meant to resemble a remote Martian outpost, six researchers are spending 120 days in isolation, completing their studies and mastering daily tasks essential to sustain human life in deep space. They also have simulated spacesuits to make movement clumsy and going outside a chore. This is the first in a planned three-year series to study the challenges associated with missions to the Red Planet, said Bill Wiecking, director of HPA’s Energy Lab and the advance self-directed science research of students.

Prior to starting their mission last month, the HI-SEAS team followed the recommendation of Blue Planet Foundation founder Henk Rogers and visited HPA’s Energy Lab, a fully sustainable science building with net zero water and net zero energy. Here, students study, research, design and developed new and existing renewable energy technologies. The hundreds of sensors inside measure and control everything from energy and water use to the amount of carbon dioxide in each room. Every sensor provides real-time readings online to allow for monitoring of energy use, Wiecking said.

The cutting-edge Energy Lab is the first kindergarten through 12th-grade school facility to meet the Living Building Challenge, a criteria that exceeds LEED

platinum certification. It’s linked to other facilities around the world that have similar programs, allowing students to exchange resources and collaborate. Over the past three years, the Energy Lab has been engaged in promoting global sustainability by example, and the lessons learned were shared with the researchers. The HI-SEAS team was so impressed that HPA was asked to help with the mission, Wiecking said.

Ten students are now helping with the experiment during their independent study period, after school, on the weekends and also this summer. They’re in charge of instrumentation, assisting with the regular monitoring of the team’s energy and water usage, as well as the levels of carbon dioxide inside the habitat. From the three weeks of data already collected, they have found patterns, such as spikes when appliances are turned on, and suggested changes to the team’s daily routines, aimed at helping lower energy consumption, said 17-year-old junior Luigi Balbo Bertone Di Sambuy.

“Being on Mars will be a delicate situation for space explorers, especially because of the limited resources. This mission is important because the researchers are learning the best way to live in a tricky environment,” he said. “They will be making self-discoveries about needs and wants, and will be wiser about their decisions relating to conserving energy. Though it’s kind of funny to be giving special suggestions to respected experts who are specialized in different fields, it also feels completely natural for HPA students to be involved in this experiment because

of our passion for science and the knowledge we have gained through our work with the Energy Lab. It’s also my greatest pleasure to help. I’m confident that together we will be able make positive changes that will lead to more sustainable, aware, balanced lives, even for astronauts.”

The biggest challenge so far, according to Balbo Bertone Di Sambuy, could be keeping an adequate water supply. He said the team has about 500 gallons of water in a tank, which has required more refilling than originally anticipated. This means the HI-SEAS team will have to be even more creative when preparing, cooking and cleaning up after meals, he added.

All research data and the responses are sent via wireless links to support staff at the University of Hawaii at Manoa and Cornell University. To heighten the communication simulation between “planets,” the communications link has a built-in delay just like real communications would take between Mars and Earth. Even though communications travel at light speed, a one-way message can take 20 minutes or more, Wiecking said.

The students are also working on a virtual reality tour of the HI-SEAS habitat, similar to the ones they did for the Energy Lab and W.M. Keck Observatory. Eventually, the tour will have pop-ups with information about the mission, features that allow the user to click on a particular sensor and get a current reading, as well as possibly include short videos showing components of the experiment, such as cooking.

Bo Bleckel, a 17-year-old junior, said the virtual

reality tour is a great tool that makes places accessible for those who wouldn’t normally have the ability to go to those locations. It’s also a great way to share information and make connections with others who are equally passionate about this mission, he added.

Twigg-Smith has corresponded with some of the researchers as they have been logging meals, recipes and reactions, as well as weighing and photographing food. She has been inspired by their attempts to find new ways to feed space explorers and overcome food boredom. Prior to the mission, she said the researchers explained to the HPA students that astronauts tend to eat less and less of their ready-to-eat meals, usually freeze dried, throughout their mission. The fewer calories can affect not only their productivity, but also their health, she added.

The absence of fresh food and working in a small space has not yet stymied their creativity, Twigg-Smith said. She also found it interesting that the researchers often cook in pairs for the social aspects and there’s a robotic dinosaur being kept as a pet.

“When the researchers first told us about their mission, my first thoughts were, ‘That’s so cool. I want to go to Mars,’” Twigg-Smith said. “Humans could be sent to Mars as soon as 2030. It’s awesome to be able to work with NASA, help these researchers gather their data and contribute to their success.”

For more information, visit [hi-seas.org](http://hi-seas.org) or [hpa.edu/academics/energy-lab](http://hpa.edu/academics/energy-lab).

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