LaTasha Taylor, April 2007 in the UW Quad

Mars Research in Utah Desert

by Amanda Ahn

It was mid-December of the year 2006. In the middle of a vast strange land, where snows lay abutting desert sandstone and the soil is red, lived a small team of young scientists and engineers working to complete their daily missions and solve problems as the next generation of space explorers. They faced temperatures that ranged from comfortable to freezing, with nights cold enough to gel the diesel oil fueling their habitat. LaTasha Taylor, a UWTC Master's student, was one of six crewmembers of The Mars Society's Mars Desert Research Station Crew 53—the second crew of NASA Spaceward Bound. She played a large role in the human factors and journalistic aspect of this simulated Martian excursion, but the situation and tasks obliged her to play several other roles as well.

"This type of experience forces you to become a geologist when you need to become a geologist. It's about learning because everyone has to contribute to the science," Taylor said. "What if my partner's rover were to just stop? All of the sudden I would have to become a mechanic and try to fix that!"

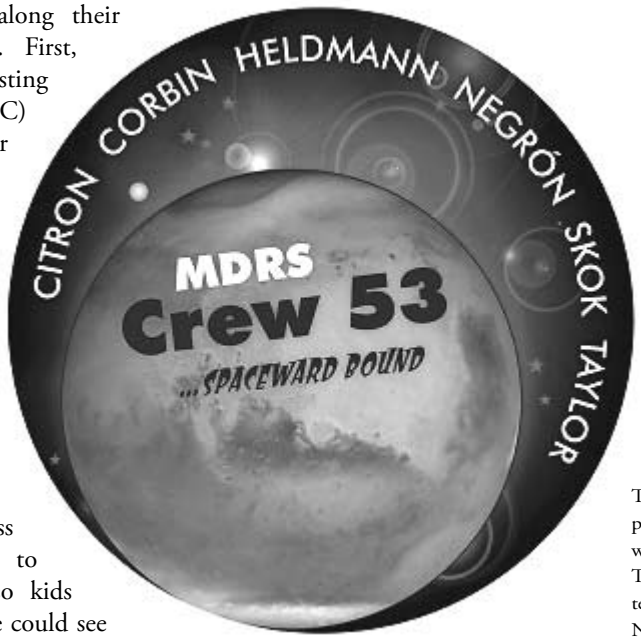
Taylor has a rich history with NASA; she undertook multiple summer internships with NASA in the past. Her background in astrobiology, aeronautical and industrial technology, biology, user interface design, and human computer interaction led her to the interdisciplinary route of "astrobiotechnology." This experience was perfectly suited for her as a major task was to work as if looking for life on Mars. The simulation was very real. The crew lived in a cylindrical, two-deck habitat ("Hab") that was only 8 meters in diameter. Because there was no electricity or water where they were in Hanksville, Utah, the crew had to rely on army surplus energy generators and water pumped as provided by the GreenHab (small greenhouse lab close to and even smaller than the Hab). In order to prepare for an EVA (extravehicular activity), the crew would suit up in the prep room—suit, helmet, gloves, oxygen tank and all. They would then proceed to the air lock before embarking on "Martian" soil.

"The whole thing about the suit; just being able to put it on, access your water from the little spout—radio in to somebody—being able to have everything I need on me as I traveled for miles and miles. We even had special boots," Taylor said. "The GPS was like your lifeline."

Crew 53 experienced a couple of nice surprises along their eleven-day journey. First, the British Broadcasting Corporation (BBC) arrived onsite for a segment on the research project. Second, the team had an opportunity to do some outreach with NASA Quest for grade school and middle school students worldwide. "Kids were in class and we were able to do a live video, so kids could see us and we could see the kids and they were asking us questions—that was so rewarding," Taylor said.

Both despite and because of the difficulties encountered, this experience was incredible for Taylor and the rest of the crew. The experience showed that there were many things to be done with human factors before making the great leap to the real red planet. The awkward helmets, bulky gloves, and finicky energy supply were obstacles that helped Crew 53 learn to become more efficient.

"I think the unexpected was what was most challenging yet most rewarding. You accomplish what you were supposed to do for the day, you got through it—you may have had some problems but you get to say 'mission accomplished.'"



The patch worn by Taylor's team at NASA.