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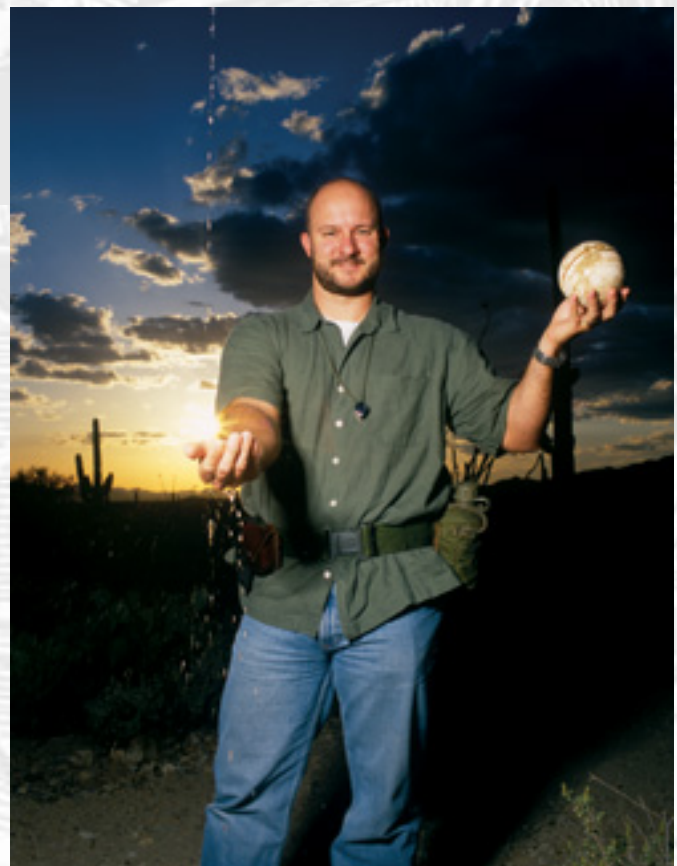
Profiles

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Les Bleamaster '98

Water, Water—Everywhere

The clock is ticking on a perfectly temperate Tucson Tuesday morning in early March as Leslie Bleamaster '98 and his colleagues at the Planetary Science Institute eagerly await the big news of the day: NASA has promised “significant findings” from Opportunity, one of its newest Mars rovers. Bleamaster is at once expectant and non-plussed. “They make these grandiose announcements, but they need to survive the rigors of science after that,” Still, he admits, “It’s pretty neat. Having little explorers on the surface is the closest we are going to get to having eyes on the ground for some time.”



Next to him, there’s no bright red phone ready to flash and ring. But there are hot rumors roaming the halls of PSI: of brine having been discovered at the

surface of Mars; speculation that as the red rover speeds across the ruddy landscape at 1 cm/sec, the pressure is melting some of the brine into mud and that it's refreezing and re-crystallizing in the tracks. Here in Arizona, where dry air and a cloudless canopy bend low the nights of summer stars—a boon to any astronomer whose livelihood rests on actually seeing planets in their courses—Bleamaster, a post-doctoral planetary geologist, performs most research in the glow of data streaming to his computer screen from multi-million dollar technology, millions of miles away.

“Earth geology started out with people walking on the ground, picking up rocks, and smashing them open,” says Bleamaster. “Contrary to that, planetary geologists start out with this telescopic view of the entire planet and have no sense of what the local geology is. We’re just getting to that point where we’re able to be intimate and personal with the rocks on the ground.”

Of course the mother of all Mars rover research is the quest for that elusive molecule: dihydrogen monoxide. “Water is life,” says Bleamaster, who studies NASA images from various Mars missions and tries to determine which areas are more likely to have been wet at some point in the past. “In extreme hot or extreme cold environments, where we have found liquid water on earth, we have found life. If we can find water in its liquid form (on Mars) the potential for life is there.” And indeed at 2 p.m., NASA scientists announce that where Opportunity now rolls, a sea the size of one of the Great Lakes may once have drenched the area in water, which subsequently evaporated, leaving large concentrations of salt.

As either a scientist or an athlete, “I’ve been immersed in water all my life,” Bleamaster puns. His swim-coach dad, Leslie, deposited him in the pool when he was still in diapers, and by age five Bleamaster was swimming competitively. Excelling at backstroke and distance freestyle, he captained the swim team at MacArthur High School in San Antonio and reluctantly retired from competitive water sports when he graduated in 1988. When the U.S. military gave him the opportunity to engage in grueling underwater demolition training for six months, he said, “Sir, yes sir!” and entered the water only to re-emerge again as a Navy SEAL.

Having mastered the butterfly stroke, too—“I had gained a little strength in the Navy”—Bleamaster enrolled at Trinity and competed during the swim program’s inaugural years. After earning his bachelor’s in geosciences, he headed to Southern Methodist University, where he earned a Ph.D. in geology in 2003. And he’s been looking to Mars for the evidence of water ever since.

Bleamaster and his wife, Jana (Swords) '98, met and married while at Trinity. He was a swimmer needing ice for his shoulder, and she was an athletic trainer wearing a "Panama Canal Zone" T-shirt. They soon realized that only a few years earlier, and unbeknownst to one another, they'd stared at the same stars under the Panamanian sky; he, stationed as a SEAL, and she with her father, who was in the Army Special Forces.

Three boys later, Bleamaster remains grateful to swim coach John Ryan, "a stabilizing figure," and the staff and faculty of the geosciences department for their help with son number one. "I love Trinity so much," says Bleamaster. "The geoscience lab turned into a day care," he laughs. "We even had a diaper pail in there. They did everything they could to make life easier for us to complete our education."

A jock for rocks, Bleamaster has even applied for a position on the Space Shuttle, but he says the idea of flying 10 times faster than a speeding bullet seems less likely to happen each time NASA announces a new class of astronauts and his name isn't on the list.

"I would still do it. I still have the desire," says Bleamaster, his eyes on the stars. But with his feet firmly planted on (very dry) ground, he adds, "But I would be just as happy teaching and inspiring others to make the best of their own lives—to follow their own dreams."

— Mark Mattox

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