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## **Biology gone barefoot: Professor teaches** from creationist view

June 01, 2009 ¦ Teresa Dunham

Mainstream is not a word that describes Dr. Daniel Howell.

A dedicated Christian since age 9, the LU associate professor of biology stands out from his colleagues at other universities because he believes in young Earth creationism instead of evolution — and he's not afraid to teach it in the classroom.

"We talk about evolution at this university probably as much as evolutionists do at [a state school], but we do it with the freedom of saying, 'It's wrong, and here is why it's wrong," he said. "And I can teach human anatomy where virtually every day it's mentioned in the course that God designed this."

Howell believes this method of teaching, combined with his ability to relate to the students, is his strongest contribution to Training Champions for Christ. The 39-year-old doesn't stand out solely in academia, though.

"I was the only person in the Virginia 10-Miler that I noticed without shoes on. That's a little bit odd, and you've got to be able to take it," said Howell, an avid runner who leads a Barefoot Hikers group.

Though Liberty University is primarily a teaching school rather than a research institution, Howell enjoys doing some scientific research individually and with his students — and one of

the topics he's studying is the benefit of not wearing shoes.

"I've run barefoot almost two years now. I won't go back to shoes," he said. "The foot is much better designed than the shoe. You step on a rock or a root, and the hard sole of the shoe does this [twist] and the ankle takes the brunt of that. I was always getting sprained ankles and twisted ankles before."

Howell did a lot of academic reading and Internet research to learn about the benefits of going barefoot and how to do it correctly without injuring himself — and now he can even run on gravel.

"Virtually every foot ailment in Western society can be traced back to the shoe," he said, listing foot maladies that rarely exist in shoeless cultures.

Shoes are like casts, he said, and they make the feet lazy. He recently compiled his research into a book tentatively called "The Bare Facts about Shoes, Your Feet and Your Health," and he is currently in negotiations with Hunter House for publication. One of the book illustrations will show how a woman's high heels literally changed the shape of her feet over time.

He also wrote a 422-page manual for his anatomy and physiology classes, including nearly 500 original illustrations that the talented professor drew himself.

He's successfully using the manual in his classes for the first time this year. The company that published it even hinted that they might want to market it to other schools beyond Liberty.

One of the lab assignments in his manual requires students to measure their foot arches and, as Howell was exploring the subject, he discovered a way to measure arches that is more efficient than currently published methods.

He eventually plans on unveiling his highly accurate technique for the scientific community.

He's also exploring a hypothesis that shoes make foot arches fall over time and that running or walking barefoot can strengthen the arches and raise them.

"Flat feet and fallen arches are epidemic in our culture. I'd like to see if what I think I've noticed in my own feet is real and can be reproduced, and I suspect that it can. I want to turn that into a real research project," he said.



Feet aren't his only focus, though. He's also studying a certain protein in cyanobacteria that seems to impact circadian rhythms.

In more basic terms, he's exploring how a protein in algae could impact its sleep-and-wake cycle.

"I like that project because students can get involved and help me," he said.

His cyanobacteria study is basic research at this point, he said, but perhaps it could someday provide the building blocks to help people whose circadian rhythms aren't on the typical 24-hour cycle.

For Howell, research has been a passion ever since his graduate studies days.

A Lynchburg native, he earned his bachelor's degree at Old Dominion University and later a Ph.D. at Virginia Tech — a school known for research. Then he began post-doctoral research at Duke University Medical Center, exploring a protein involved in cystic fibrosis.

His research later took him to McGill University in Montreal, Canada, but eventually the scholar who'd traveled far and wide was ready to come home.

"After my graduate studies and my post-doctoral studies, I was looking for a 'real job'— a faculty job. Liberty was at the top of the list. I knew it was not only Christian but an exciting place to be," said Howell, who has a wife, Carla, and three children, ages 4 to 10.

Sitting in his office in the Science Hall recently, Howell held up a rock — his "memory rock" — and said it reminds him of how he came to LU. On the smooth rock, he'd drawn two butterflies and written "A Way Home."

"I really believe the Lord led me here," he said, as he began to tell the story behind the rock.

When he was in Montreal, he explained, he was praying about a job. He knew he wanted to come to LU, but the university wasn't hiring at the time.

One day as he rode home from McGill University on a city bus, he was praying and listening to a song on his headphones. The lyrics asked God to send a butterfly or two if He could hear the singer's prayers — and at that moment, Howell prayed those same lyrics to God.

"I said, 'Lord, if you hear me, just show me a butterfly or two. Just show me something,'" he remembered.

When the bus came to his stop, he walked a few blocks to his house and looked at the screen door. There on the door, his oldest daughter had hung a "Dear Daddy" drawing with two butterflies on it.

"I knew He heard me and that He was going to answer that prayer," Howell said.

A few months later, Howell began his job at LU.

"I believe the Lord directed all of those steps," he said. "Maybe I over-spiritualize, [but] I don't think so. I think I prayed for a butterfly, and God showed me a butterfly through my little girl."

That was 2003, and six years later he's still thrilled to be at LU teaching anatomy and physiology, chemistry and biochemistry.

"It's more than I was hoping for. I love this university more now than I did six years ago."

To learn more about Dr. Howell's research or barefoot hiking, email him at dhowell@liberty.edu.