

Lifelines



Biology/Allied Health Department

Insights From The Professor What about Dinosaurs?

Editor's note: We mourn the loss of former professor, Lee Spencer, who passed away on November 15. An indispensable leader in origins research at Southern, he will be missed greatly. We revisit an article Lee wrote for Columns magazine in 2007; below is an excerpt.

Children can tell you what each kind of dinosaur is, what it looked like, and what it is thought to have eaten. They can also tell you that the dinosaurs are found only in the Mesozoic period, that all of the dinosaurs went extinct 65 million years ago when a great meteor hit the earth, and that they lived for millions of years before man walked on earth.

Those raised as Christians will be able to tell you that God created man and all life; that when He created man, He put him in the Garden of Eden; and that the earth was destroyed by the flood, and God saved Noah with his family and all of the animals He created in the ark. They will tell you this because that is what the Bible teaches.

Wait a minute! Isn't there a contradiction here? Dinosaurs went extinct millions of years before man existed, but all of the animals God created were on the ark? Both stories can't be true. Is the Bible story a myth? Which story is right?

Scientists in Southern's Biology Department believe that life on earth is relatively young and that most of the geologic column was formed by Noah's Flood. We believe that there was no death before sin (Romans 5:12-14, 1 Corinthians

15:21-22) and that all creation, not just man, groans because of sin (Romans 8:21-22).

Since the fossil record is one of death (after all, fossils are the remains of dead plants and animals), all fossils must have formed after sin. The only biblical record of massive plant and animal death is Noah's Flood. Although some of the fossil record could have formed between sin and the flood or after the flood, most of the fossil record had to be formed by Noah's Flood.

How then do we understand that dinosaurs are found only in the Mesozoic period? We believe the earth before the flood, like the world today, had different life zones or habitats that changed with increasing altitude and latitude. If you travel from the tropical lowlands to the North Pole or South Pole, you will see a change in plants and animals as you travel. The same pattern will be seen as you go up high mountains. We can give names to each of those life zones. Scientists have done this for the life zones of North America. Going from lowest to highest, they are the Lower Sonoran, Upper Sonoran, Transition, Canadian, Hudsonian, and Arctic/Alpine.

I believe that there were life zones, or biomes, before the flood as well. Those have been named Triassic, Jurassic, Cretaceous, Tertiary, Quaternary, etc. The Triassic, Jurassic, and Cretaceous are grouped together to make

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Power for Mind & Soul

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the Mesozoic, while the Tertiary and Quaternary are grouped together to make the Cenozoic.

As the flood waters rose, they encountered, destroyed, and buried the plants and animals of each biome going

up in elevation. Thus the names of the geologic column represent different biomes, not large amounts of time. They do represent time, though, since the flood waters would encounter the Jurassic life zones before the Cretaceous and therefore would be older – though

not by millions of years, but by minutes, hours, or maybe even days as the flood water rose.

Read the rest of the article at southern.edu/biology/dinosaurs

By Lee Spencer

Students in Service From the Jungles of Bolivia

In the jungles of Bolivia, 20 minutes from the town of Rurrenabaque and nestled between groves of palm trees and brush, lies Familia Feliz. Familia Feliz is an Adventist boarding school/orphanage specifically targeted to help boys and girls coming from abusive homes thrive and develop a relationship with Jesus. Here, I am a mom to 11 girls. I share this responsibility with two other volunteers: Torie Palmer, a student missionary from Union College in Nebraska, and



Tracey Hutchinson, a psychologist from Jamaica. Our girls range from ages 7 to 17. The majority of them have been physically and/or sexually abused by a member of their family. One of my 11 girls is an autistic 10-year-old baby. She cannot walk, feed herself, or live without a diaper. However, of all the kids, she brings us the most joy. Her little giggles and coos bring smiles to the faces of all who meet her. Even so, going from being a normal 20-year-old to being a mother of 11 in the blink of an eye has been a bit of a challenge.

At first, I felt useless and confused. My girls were being defiant and were using me to get away with things they weren't allowed to do because I was new. I can't lie; I wanted to leave, badly! I

realized that I needed to ask God for stamina and joy. I'd need Him to help me be the best that I can be to really show God's love to my girls. One thing that I keep encountering in Scripture is that, if we ask, God will fight our battles for us. For example, in 2 Corinthians 12:9-10, God tells us of His ability to show His perfect strength through our weaknesses.

All of the volunteers here at Familia Feliz are also teachers. I teach English, Bible, music, and three different math classes in Spanish. I pity my students who have to



tolerate my poor grammar, insufficient vocabulary, and lack of training in the field of education. Fortunately, we are all in school together. Academic achievement is not emphasized as much as in the United States. The children work four hours each weekday in



agriculture and have schoolwork for four hours. Wake-up time is 4:40 a.m., with bedtime ideally at 8:30 p.m. Study time totals one hour a day, and there is only one hour of free time.

I have had multiple experiences where God's mighty hand was revealed to me. A major one was the process of obtaining my work-permit visa. The normal process involves the submission of initial paperwork shortly after arriving in Bolivia, then returning back within 30 days to finalize the visa process. When I returned to finalize the visa application, I was told that there was no evidence of me ever having entered the country. As a consequence, I would not be able to go back to work at the orphanage for up to three months and would need to pay an additional \$200 fine. As it turned out, the immigration officer at the airport had only stamped my passport but had omitted registering me in the computer. I panicked and asked family and friends for emergency prayer. After trying for several

days, we were about to give up when the local missionary lawyer suggested we talk to the secretary one last time. This time, she directed us to a supervisor who, as it turned out, was an old school friend of the missionary. Long story short, I received my visa on the 30th day and was able to get back to work at Familia Feliz without having to pay the fine. God is so faithful!

Two weeks ago, our school had an outing to the nearby river in the jungle. Food was prepared by the school children on site; hygiene was not a priority. A few hours later I ended up in the hospital

with altered mental status, fever, nausea, vomiting, and the inability to move my limbs. In fact, my hands were clenched in a chicken claw-like position. It was a scary time, but through it all, God gave me peace. As it turned out, I was severely dehydrated and had a severe electrolyte imbalance, resulting in my personal experience with rigor mortis. After a few IV bags and electrolytes, aided by prayer, I was able to walk out of the hospital on my own two feet – and all in one day!

Lastly, I want to talk about an experience I had with one of my “daughters.” Her name is Yummy; she is a new 10-year-old girl at the orphanage. She acts like a 7-year-old and 15-year-old all at the same time. She is extremely defiant and difficult to deal with. She was driving us all to insanity and was about to be kicked out of the school. We prayed and pleaded with God that He would give us love for this girl, His perfect love. It came! One night, she had a horrible toothache and was crying and moaning on the floor of her room. I went in and held her as she sobbed. At that moment, I felt unconditional love grow in my heart for this special girl. In turn, the next day she gave me a paper heart with the following written on it: “Teacher Jenny, I love you so much! You are like a second mom to me. Thanks for taking care of me during the good and the bad.” While she still has her problems, she has improved so much that she will be allowed to stay.

I came to Bolivia to serve, but I can say that I have received much more than I can ever give. I look back at the two short months that I have been here, and I marvel at all that God has done and continues to do here at Familia Feliz. I can't say that it has been easy, but it sure is well worth it. Please keep us, including all the children and staff, in your prayers.



*Submitted by Jennifer Makowski
to Tim Trott*



Alumni Spotlight

Nora Turner-Repucci, Biology, Class of 1995

I remember reading James Harriot books as a preteen and deciding I wanted to be a veterinarian. (My mom says it was earlier than that!) I have always had and enjoyed animals in my life, including cats, a dog, a hamster, and a pony, but I think it was the medical part that held the most intrigue.



Veterinarian Nora Turner poses with a four-legged friend.

I was one of the first people to graduate from Southern College of Seventh-day Adventists with the intent to go into veterinary medicine. I researched the different universities in the surrounding states that had veterinary programs and then tailored my curriculum to match what was needed. I remember taking summer classes to help spread out my class load and also make it possible to experience some of the more adventurous classes (Smoky Mountain Flora and Tropical Marine Biology to Indonesia). I worked and volunteered at a couple of the local veterinary clinics during the summers and after classes, graduating in 1995

with a Bachelor of Science in Biology with a chemistry minor.

When I was accepted into University of Tennessee Knoxville's College of Veterinary Medicine, I found that Southern had well prepared me for the difficulty of the classwork; there was just more of it. I discovered that there were a lot more options in veterinary medicine than just being a family veterinarian: I could specialize and be a cardiologist or a surgeon, work for a pet food or pharmaceutical company, do research or be a teacher, etc. While I still decided to practice clinical medicine, I was very interested in surgery and started spending time in the surgical suite of the university animal hospital. I became president of the Student Emergency Surgical Team, regularly helped/volunteered in surgeries, took surgical electives, and did a spay/neuter elective externship at the Native American reservations out West.

As a result of my interest in surgery and becoming a veterinary surgeon, I applied for a medical/surgical internship and was matched to a private specialty hospital in Springfield, Massachusetts. I graduated with my Doctor of Veterinary Medicine degree in 1999 in the top 20 percent of my class and headed to Massachusetts for a year to advance my skills in veterinary medicine. While it did not work out for me to do a residency in surgery, the internship was the best thing for me in my veterinary career. Despite the 14-16 hour days,

overnight emergency shifts, etc., I was able to work with specialists (internal medicine, ophthalmology, surgery, cardiology, dermatology, emergency medicine, etc.) in the real world on an everyday basis and was able to greatly increase my skills, confidence, proficiency, people skills, business skills, and experience within a year.

At the end of my internship, I chose a job in Charlotte, North Carolina, and worked for seven years at a small animal practice. I was often the primary doctor and surgeon and helped the hospital grow and flourish. Then I decided I needed a change. I began doing relief, or PRN work, where I would work in various clinics/hospitals in the area to fill-in for veterinarians who wanted a vacation, were sick, or needed extra help at the clinic. I worked evening and night shifts at the local emergency hospital as well. I was able to see how

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William and Nora Repucci, pose with their son, Turner.

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different hospitals were run, a variety of ways doctors practiced medicine, and do some emergency/critical care work. I enjoyed practicing this way so much, that I continued and – still practice this way today. I get to choose my schedule, practice in a variety of places, and experience a variety of different people and demographics. Wound repair and care, soft tissue surgery, and working with bulldogs (as well as other

brachycephalic breeds) are some of my favorite things.

During my time in Charlotte, I was an active member of the University City Seventh-day Adventist Church and helped with the youth department and Adventurer club. I met my husband, William B. Repucci, in 2003. He was active with camping, hiking, autocross racing, and airplanes. We got married in September 2004, and Turner Reed Repucci joined our family in 2008, keeping us young and active and always

on our toes! We moved in 2012 to Greenville, South Carolina, where I continue to do relief veterinary work and our world revolves around daily life, our son, and aviation. The four-legged members of our family currently include two cats (Zebra and Stormy) and our one-year-old (rescued) English bulldog, Hannah. I also enjoy scrapbooking, card making, national parks, and traveling.

Submitted by Nora Repucci to Joyce Azevedo

Southern Adventist University Preparing to be an Official Tennessee Arboretum

Program to Enrich Student and Community Outdoor Experience through Tree Identification on the Campus

Currently, Southern's arboretum research group (Michael Baranda, Vanessa Gonsalves, Yalyn Labrador, McKenzie Martin, and Tise Suzuki) has identified more than 1,000 campus trees representing 20 families, 43 genera, and 70 different species. We are currently in the process of locating each tree using high-precision GPS. All trees will be mapped using ArcGIS, producing an online presence that enables users to explore the campus and study the variety and distribution of trees. Select trees will be included in what will be Southern's arboretum. Each of these trees will receive a unique identification tag with a corresponding QR code. Online users will be able to select each tree and see a series of photos of diagnostic characteristics that will allow them to key out the tree to species. While visiting the arboretum on campus, guests will be able to use their smart phones to read the QR codes on each tree tag. This will take them to the same webpage containing identification photos and information about each tree.

By Ben Thornton



Top left, clockwise: Michael Baranda, McKenzie Martin, Yalyn Labrador, and Vanessa Gonsalves; not pictured: Tise Suzuki.



Department Happenings

The Biology/Allied Health Department started the 2017-2018 year with over 400 students in the department. Our freshmen have filled two sections of General Biology I lectures and three sections of Anatomy and Physiology I lectures.

Professor Ben Thornton's Field Ecology class to the Bahamas almost doubled in size this past summer.

Professor David Nelsen's black widow spider collection now has a permanent home in the department. The collection has been moved out of the faculty research lab to a small room where temperature and humidity can be controlled; we want the best for our spiders!

Professor Keith Snyder gave a poster presentation in Seattle, Washington, to the Geological Society of America meeting in October on a unique polyphyletic dinosaur quarry that has been excavated in Wyoming. His team found bones of *Triceratops*, *Edmontosaurus*, *Anzu*, and *Thescelosaurus* all in one small area. Usually bonebeds are monodominant, so this is a very rare situation. Investigation will continue at the 2018 Dino Dig.

By Ann Foster



Field Ecology class Summer 2017 to the Bahamas with Professors Ben Thornton and Tim Trott.

