



**BIOLOGY/ALLIED HEALTH DEPARTMENT**

**ALUMNI SPOTLIGHT**

*By Tais Bautista, MPH, 2021 BA Biology graduate*



*Tais Bautista at the University of Miami Health System.*

I started out my freshman year at Southern with plans to go to the “promised land” of Loma Linda University and become a physician someday. That was what I thought I wanted. I eventually graduated in 2021 with a biology degree minus the pre-med track. I had known early on in my junior year that something was off with my pursuit of medicine, but I refused to come to terms with it. Part of me felt shame that I was not smart enough, and the other side of me felt embarrassed to quit.

I cannot deny that my remaining time at Southern was disheartening and emotionally difficult for me. It was a very lonely time of comparison, and I wondered whether or not God wanted me in healthcare. I found myself cheering and witnessing all of my friends achieving their dreams,

but I never felt like my time had come. Around this time, I started creating a support system that included a group of mentors and advisors much smarter and wiser than me to navigate through a season of doubt and insecurity. After graduating, I took a gap year to really take time to think about my next step.

After nearly a year of reflection, I realized that God had placed in me a passion for advocacy. I still wanted to pursue something in healthcare, and I realized I could do just that through public health. So, I did an accelerated master’s degree in public health at Nova Southeastern University with a concentration in health education and promotion, from which I graduated in December 2023.

**Alumni Spotlight Cont. on Page 3**

**Lifelines**

# DEPARTMENT HAPPENINGS

By Keith Snyder, PhD, Department Chair

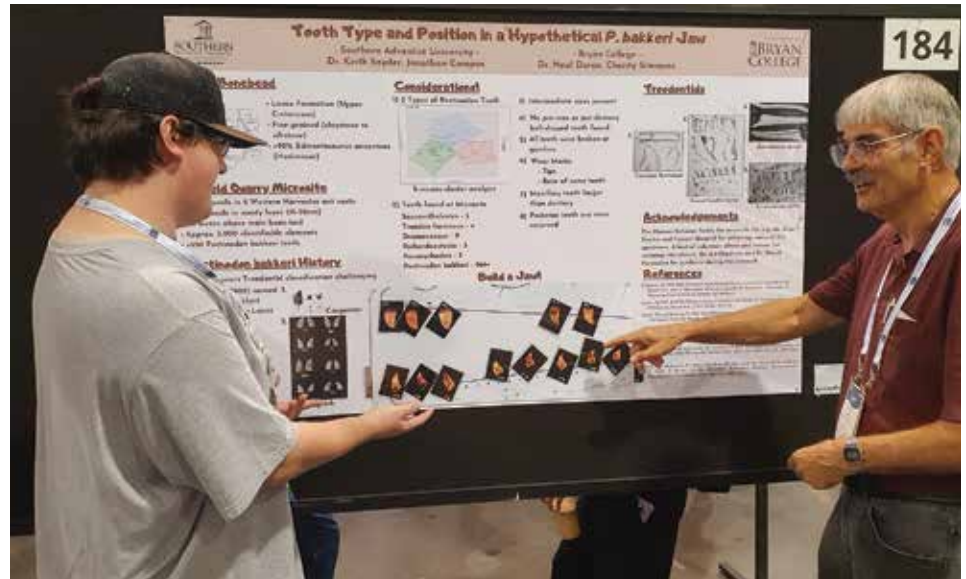
## Biology Flags

Over the past several years, we have sent out our biology flags with students traveling around the world. Professor Ben Thornton has linked the pictures and locations to an online map of the world that you can check to see what new places our students are traveling to while enjoying biology.

Use this URL to access Southern Biology Around the World: [www.southern.edu/arboretum/flag/index](http://www.southern.edu/arboretum/flag/index). If you want a flag for pictures, let us know by emailing [benthornton@southern.edu](mailto:benthornton@southern.edu).

## Presentations

Professor David Nelsen was an invited speaker at the Southeast Asia Division meetings in Thailand for the Education Conference on Charting Biblical Creation: Equipping Bible and Science Educators for Mission. He made four presentations and also preached the Sabbath sermon, with titles such as “Science, Knowledge, and



Professor Keith Snyder, right, presenting a poster.

World Views: The Journey Approach” and “Design in Nature.” We are proud that Professor Nelsen was able to represent us well at these meetings.

Professor Keith Snyder presented a poster titled “A Hypothetical Pectinodon bakkeri Jaw from the Lance Formation” at the international Geological Society of America annual meetings

in Anaheim, California, the week of September 23. Contributing authors for the poster included biology student Jonathon Campos; Neal Doran, PhD, a Bryan College professor; and his student, Charity Simmons.

Professor Nelsen sent two recorded presentations for the Creation Celebration festival held at Adventist University of the Philippines in October, with the main talk titled “Science, Creation, and Me: Why I Am the Problem and the Solution.”



Professor David Nelsen speaking in Thailand.



Close-up image of a tardigrade.

More locally, Professor Aaron Corbit and Assistant Professor Abhishek Thavamani both presented at the High Point Chinese Church “Creation Call,” held October 12-13. Professors David Nelsen and Ben Thornton both led nature hikes during the weekend, and Professor Snyder helped with fossil displays. We are again happy to participate in these important meetings sharing God’s creation with others in the area.

## For Your Information:

Over the past five years, the number of freshmen biology majors has remained near 95, but this August, nearly 30 additional students chose to join our department, bringing our freshman enrollment up to 122 this year. We had to add an additional General Biology Lab and also raised the student limit in our Southern Connections classes from the 15 students, which is standard in all departments across campus, to well above 20 students in each class. We are excited to have each of these new students join our department!

Professor Joyce Azevedo is on a sabbatical this semester to start her research on tardigrades (water bears). We are interested to see where this research will take her.

We welcome back to Southern Tise

Suzuki, who was a student in our department several years ago and is now joining the faculty as a full-time assistant professor. She is delving deeply into teaching A&P and Basic Microbiology this semester. Additionally, we are happy to have Jessica Stotz join us as an assistant professor for the year as we look for a full-time replacement for Noemi Gonzalez, who resigned due to family duties. Professor Stotz is bravely conquering the job of teaching A&P I

and A&P II for the first time. We wish both of these new faculty members great success!

The Biology/Allied Health Department welcomed students back from Fall Break with a catered come-and-go Asian lunch on October 22 and 23. More than 180 students (and a few faculty) enjoyed a delicious free lunch. A big “Thank you!” to administration and to the cafeteria for helping us make this happen. ■



*Tise Suzuki, assistant professor*



*Jessica Stotz, interim professor*

## Alumni Spotlight Cont. from Page 1

I had the opportunity to learn more about my passions within public health and eventually realized that I enjoyed research. God has been good to me and allowed me the opportunity to publish for the American Diabetes Association. I currently work at the University of Miami as an infectious disease researcher.

To any struggling student, I want to say that medicine is not the only career path for serving patients. In my job,

God has revealed to me the importance of bringing awareness and amplifying patients’ voices through the data collected during research. For me at work, love looks like serving with kindness the vulnerable individuals who are often stigmatized. It also involves hearing and educating patients on HIV care and gathering data to create future patient interventions. Meaningful work can still be done outside of medicine,

and I am glad that God allowed me to see that and led me into a career I am passionate about.

I want you to know that God is just as present with us in the pit as He is in the palace. To anyone reading this, I hope you know that you are not alone and it will work out eventually. If you do not feel like you have a community, take small steps to reach out; you do not have to do things alone. ■

# INSIGHTS FROM THE PROFESSOR

By Aaron Corbit, PhD

## *Should We Care About Biodiversity?*

One of the recent stories that crossed my digital newsfeed relates to the 2024 Living Planet Report released by the World Wildlife Fund. The headline-grabbing finding in this report is a 73% average decline in wildlife populations since 1970. While we should be careful to correctly interpret this number (i.e., it does not mean that 73% of species have gone extinct or that 73% of species are declining) and recognize the uncertainty that surrounds such statistics, it nonetheless highlights what has been called the biodiversity crisis. It is sobering to realize that humans are doing a myriad of things that reduce wildlife populations, driving species ever closer to extinction and disrupting the complex ecosystems they inhabit.

As a creationist, I have always considered the biodiversity crisis a reason for concern. My belief is rooted in the idea that valuing God's creation is an integral part of being a creationist. However, some Adventists view environmental issues as a distraction from spreading the gospel.

## *Environmentalism vs. Evangelism*

This alternative viewpoint bases its reasoning on fundamental Adventist beliefs that I, too, affirm—particularly re-



*Livestock in deforested Amazon Rainforest.*

garding the imminent second coming of Christ and the importance of evangelism in preparing for His return. Proponents argue that if Christ's return is imminent and the Earth is destined for destruction (2 Peter 3:10) and re-creation (Revelation 21:1), then our emphasis should be on evangelism rather than attempting to preserve biodiversity on a doomed planet. Speaking about climate change and other environmental issues, one Adventist pastor said:

“My goal as a Christian is not to extend my time on this planet. ... I believe that the Bible is the inspired word of God that holds hope for us as humans and that this hope is not staying here on this Earth indefinitely; that is something an atheist would want to do. My Bible says that the only hope for this world is Jesus Christ!”

## *Responding to the Alternative View*

While I appreciate the earnestness behind this perspective, I respectfully disagree with its narrow focus. I do not dispute the nearness of Christ's return or the necessity of evangelism. Rather, I would argue that a narrow emphasis on these issues has led individuals who espouse an alternative view to overlook other vital Biblical principles that call us to care for both creation and one another.

To understand the value God placed on His creation, we need to look no further than Genesis 1, which documents God's forming and filling each part of creation to exist in a mutually sustaining relationship with each of the other parts. This is affirmed by God's repetitive declaration, six times throughout the narrative, that His creation is “good” and culminates in the declaration that creation, as a whole, is “very good” (Genesis 1:31, NIV). This indicates that the entirety of creation held significance and value, surpassing the worth of any individual part.

God celebrates this unity when He sets apart the seventh day. When God sees every part of His perfect creation working together as a unified and mutually sustaining whole, He rests from His work and blesses the Sabbath day as a memorial to how He intended the world to be (Genesis 2:1-3).

## *Understanding Our Role in Creation*

At the center of God's unified vision of creation was humanity. “Then God said, ‘Let us make mankind in our image, in our likeness, so that they may rule over the fish in the sea and the birds in the sky, over the livestock and all the wild animals, and over all the creatures that move along the ground’” (Genesis 1:26, NIV). God did not intend for humans to rule creation in an exploitative way; rather, He created us as “middle management,” delegating to us authority over creation but still expecting us to fulfill the vision of our cosmic CEO. This directive to humanity is confirmed when God tells the humans He just created not only what they are supposed to eat (“every seed-bearing plant on the face of the whole earth,” Genesis 1:29) but what the animals are to eat, as well (“every green plant,” Genesis 1:30). Why tell humanity what the animals will eat unless He is implying that we are to care for them? God is even more direct about His intentions for us in Chapter 2, where the Bible says that God placed the man in the garden to “work it and take care of it” (Genesis 2:15, NIV).

## *Perfect Creation in a Fallen World*

It is clear that what we see in our present day is not what God intended at creation. However, despite the presence of parasites and predators, the legacy of that initial perfection remains. Ecosystems are still mutually sustaining, and

biodiversity thrives when each species fulfills its role. Even predators contribute positively to this balance, often increasing biodiversity by their presence and sometimes causing ecosystem collapse when absent. Because of this, nature still sustains us. Human well-being depends on nature providing services such as food production, water purification, disease mitigation, and more.

### ***Our Legacy: Exploitation of Creation***

Although God designed nature to bless and sustain us, we have largely failed to reciprocate. In addition to the previously mentioned statistic of a 73% drop in the average size of monitored wildlife populations, another telling study showed that wild mammals make up only 5.6% of the total biomass of mammals on Earth. By contrast, humans account for 35.1%, while livestock dominate, making up 58.3% (Green-spoon et al., 2023). Our collective, modern relationship with God's creation is clear: we industrialize the aspects of creation that serve us directly and displace and destroy the rest. Where God intended that we rule over creation in a posture of blessing, we now rule in a posture of exploitation.

### ***Consequences of Exploitation***

If nature is essential for sustaining humanity, as God intended at Creation, then we destroy it at our peril. Researchers have identified nine planetary boundaries essential for maintaining a stable and safe Earth for human life. These boundaries are threatened by climate change, pollution from synthetic chemicals, ozone depletion, airborne particle pollution, ocean acidification, disruption of nutrient cycles, changes to freshwater systems, land system change, and biodiversity loss (biosphere integrity). We have already crossed six of these



*Amazon Rainforest deforestation.*

boundaries, with biodiversity loss being the most compromised (Richardson et al., 2023).

While scientists often refrain from predicting the timing or nature of potential consequences for civilization, it is clear our current trajectory is unsustainable. These scientific conclusions bring to mind the “time of trouble” from Daniel chapter 12, and I think they could be indicators of the nearness of the end of time. But how should we relate to the natural world now, as we anticipate that end and the return of our Savior?

### ***God's People at the End of Time***

The mission of God's people in the end times can be understood through the first angel's message. In Revelation 14:7, the angel calls us to:

***“Worship him who made the heavens, the earth, the sea, and the springs of water” (NIV).***

This refers to Genesis 1 and the Sabbath, a reminder of God's perfect creation and our intended role in it. The implication in the first angel's message is that part of our mission should be to point people back to that ideal and humanity's role in it. In an age of exploitation, this is certainly a timely message.

However, we should not fall into the trap of thinking that care for creation

means acting at the expense of our fellow man. Because God intended us to be part of His mutually sustaining creation, proper environmental action should cause both humans and nature to flourish together.

### ***Caring for Creation Benefits Humans***

An example of this harmony is evident in South America, where poverty is a significant driver of the destruction of the Amazon rainforest. The poorest must often resort to destructive farming methods to survive. Helping them out of poverty allows for sustainable farming practices (Brondízio et al., 2009), and the intact rainforest sustains the weather patterns that bring the rains that water their crops (Vergara, A. et al., 2022).

The most significant cause of deforestation is the meat consumption of wealthier individuals. About 75% of deforested areas in the Amazon are now used for cattle ranching (Oliveira et al., 2020). Shifting to a plant-based diet can help reduce this deforestation. When crops are grown directly for human consumption instead of being converted to cattle feed, less land is needed to provide food for people. This not only benefits creation but, as Adventists have known since the late 1800s, plant-based diets are better for human health (Godfray et al., 2018).

As we strive to fulfill the gospel commission and anticipate Christ's return, we must not become so heavenly minded that we are of no earthly good. Since biodiversity is crucial for our health, caring for it is not a distraction from our mission as Adventists; rather, it is essential for honoring God's creation and promoting the well-being of all. We should reflect on and celebrate this ideal each Sabbath. May we be found faithfully upholding it when Christ comes to restore creation to what He intended at the beginning. ■

**References for Insights on Page 6**

## References for Insights From the Professor (article on Pages 4-5)

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# ORIGINS

By David Nelsen, PhD

On the weekend of September 13, 2024, five students (Sarah Hunter, Gabriel Brown, Lincoln Yaste, Miguel Sanchez, and George Imuro) and three faculty members (Aaron Corbit, David Nelsen, and Abhishek Thavamani) from Southern’s Biology/Allied Health Department attended the creation conference put on by Todd Wood, PhD, of the Core Academy of Science. The conference included lectures, discussions, and hands-on experiences. Wood presented his research on the post-cranial morphology of hominin (anatomically modern humans) fossils and other fossil forms, some of which are mentioned below.

The weekend started with a robust discussion of Genesis 1 and 2, emphasizing what it means to be made in the “image” and “likeness” of God. Next, the group attended a review and discussion comparing the post-cranial morphology of *Homo neanderthalensis*, *Homo habilis*, *Homo erectus*, *Homo floresiensis*, *Australopithecus afarensis*, and *Australopithecus africanus*. Following this presentation, participants were able to view and handle specimens (casts of bones, tools, and art) across these species.

Lastly, Wood presented his argument on how the hominin fossil record can be understood within a Biblical framework and whether some of these fossils represent forms, that, along with us, were created in the “image” and “likeness” of God. The argument can be summarized as:

1. The fossil record contains ample evidence for many of the ancient hominid forms, particularly Australopithecines and Neanderthals. These species are consistently different from modern humans in morphology and—in the case of Neanderthals, where we have genetic material—genetics.
2. Baraminological analysis suggests that apes and Australopithecines mainly cluster separately from all members of the genus *Homo* (i.e., they represent separate created kinds).
3. All of these fossils appear in what many consider post-Flood deposits of the geologic column—that is, within the layers of the Cenozoic.
4. Some of the fossils in the genus *Homo*, such as Neanderthals and a few others, have evidence of culture (crafting, art, and burial rituals).

Wood thinks it is reasonable that

multiple species of “humans” occupied the Earth simultaneously and diversified after the Flood. The diversification could be associated with the dispersal after the Tower of Babel story found in Genesis 11.

The creation conference challenged our students to think about the evidence presented. We are very proud of their willingness to ask questions and start conversations following the presentations. We hope to make attending this conference a regular event. ■



Attendees of the Creation Conference.

# STUDENTS IN SERVICE

By *Amaris Murillo-Mena, senior biomedical major*

Before my freshman year at Southern, I was set to go to Penn State University. I already had attended orientation through zoom, built a relationship with my soon-to-be roommate, and toured the campus. Nevertheless, God closed every door, loophole, and possibility for me to attend a large public university campus, where I intended to study. He left only one door open, which I angrily and frustratedly went through. Southern was the opposite of everything I had wanted for myself, and while I tried to rebel against what God intended for me, it was clear He wanted me here.

At the beginning of my freshman year, I had vowed to myself that I would never join a LifeGroup, but to keep a long story short, I became a LifeGroup leader the following semester. Throughout my time at Southern, my spiritual life changed drastically. I decided to become a student missionary during my freshman year, and after talking with my adviser, it seemed that going after my junior year would work best for me.

Due to my love for kids, I knew I wanted to go to an orphanage. Three locations were available: Bolivia, Bangladesh, and Kenya. Since I am Bolivian, I wanted to go somewhere completely different from my own culture, and I had often heard of mission trips to Africa, so I decided on Bangladesh.

Bangla Hope Children's School in Hazrapur, Bangladesh, is home to approximately 170 children, from newborn to age 22. The children rely completely on the missionaries for guidance, love, and entertainment. As you can imagine, many behavioral issues come alongside a dependence on missionaries, as well as the cycle of children raising each other and fighting for affection. My roommate and I were the only student missionaries present at this location during the six months we were there, and needless to say, we were never alone.

Before I went to Bangladesh, I had

felt insecure and unqualified, due to a rocky past characterized by many mistakes and only recent spiritual growth. When I looked at other missionaries, I saw students who had grown up in the Adventist school system or were homeschooled and had grown up with strong spiritual values and virtually no past mistakes. At the beginning of my time at Bangla Hope, these insecurities and feelings I thought I'd pushed aside were intensely magnified.

The kids would explicitly tell me constantly what I lacked, failed in, or didn't live up to. I started to become overwhelmed, and one day I woke up to see "Amaris bad missionary" scratched into the door to the rooftop, where I'd go to every morning for my devotionals. That morning, instead of giving up, I chose to surrender completely to God. It was something I thought I'd done earlier, but I hadn't done it properly. Now it was evident that on my own, I was incapable.

In the following weeks, the kids noticed a change in me, as they made sure to point out. The message on the door was replaced with "I love you" and "Best Missionaries"; it became a symbol to me of the saying, "God doesn't call the qualified but qualifies the call." In many instances I still felt incapable and sometimes ill-equipped, but a verse that got me through the last few years at Southern and my time at Bangla Hope is Philippians 4:13 (KJV): "I can do all things through Christ which strengtheneth me."

Christ does not give up on those He loves, and He awaits and embraces those who call upon Him for guidance. Many times my patience was tested, and I felt as though I had made no progress in teaching wherever I could, but I learned that the fruit of our labor is not often seen and should not be our source of gratification.

Genuine service extends beyond fulfilling expected tasks; it is about the relationships and love shown in every-

day interactions. We are privileged to serve a God who has the patience and understanding to forgive repeatedly, even when others feel that someone is hopeless. The least we can do is reflect this unique love to others in any and every instance. My mission experience allowed me to recognize the importance of surrendering everything we are and have to Christ—to wholeheartedly rely on Him and His plan for us, even when we don't understand it at the moment. I encourage everyone to take advantage of opportunities to serve. I genuinely believe that service is why Christ brought me to Southern, and it is something I will continue to do now and in the future. ■



*Children at Bangla Hope Children's School with Southern Biology flag.*



*Amaris serving children in Bangladesh.*

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## SOUTHERN BIOLOGY

*By Ben Thornton, PhD*

Recently, a blue and green flag appeared at Stonehenge emblazoned with the words “Southern Biology.” Visitors to the prehistoric monument in England didn’t know quite what to make of it, but it is clear that Southern Biology is traveling the world!

Request your free Southern Biology flag today, and we will see where it appears next. Take a photo with the Southern Biology flag, scan the QR code, and upload the photo or email it directly to [ben-thornton@southern.edu](mailto:ben-thornton@southern.edu). Please include a short description, date, and GPS coordinates. Follow the flag! ■



*Retired professor Rick Norskov at Stonehenge.*