For paleontologists and archaeologists, there is much more than academic significance to each discovery. Whether it is the vertebrae of a larger-than-life ancient snake, six million sets of human remains in the Catacombs of Paris, or the remains of a fetus in an ancient Egyptian vessel, these treasures of the past serve as a significant reminder that history does in fact repeat itself. Let the adventure begin.

STORY BY: Sasha Fields
PHOTOS BY: Philip Marcel

With an ominous “God willing” murmured by the Egyptian guards and a drawn map handed off as they unlocked the gate, Dr. Ashley White entered the ancient Egyptian necropolis with his wife, Michele, and son, Ethan, who was just 10 at the time. Even while crawling flat on his stomach, White could feel the burial walls abrading his back. Through the maze of tunnels he saw no opening ahead and instead found himself face-to-face with a rat, which meant that cobras slithered nearby.

This is a typical summer for Ocala-based archaeologist, surgeon and author Dr. Ashley White.

For the past 20 years, White has utilized his skills that he honed as a pathologist to travel to 22 countries, studying and chronicking plague cemeteries, mummies and ancient documents.

After graduating from East Carolina University with a degree in biochemistry and a deep fascination in the history of plagues, he attended the University of North Carolina at Chapel Hill for the dental surgery and pathology graduate program. He explained that at the time, there was a tremendous shortage of medical examiners in North Carolina. The dual program allowed him to complete the surgery program, learn how to identify human remains and excavate crime scenes. After graduating, he began spending his summers in various countries, following his passion for plagues.

White’s travels put the adventures of any fictional protagonist to shame. He can’t begin to count the number of plague cemeteries that he’s been in. Yet his view of the world is remarkably simple — divided into “the old world” and “the new world.”

In 2006 in the Catacombs of Paris, which house more than six millions sets of remains, White ventured into areas with deep, moving water, evading any animals for the good of his craft.

After 20 years of adventure, his work has been compiled into a groundbreaking book, “Physical Signs in Medicine and Surgery: an atlas of rare, lost and forgotten physical signs.”

White said that the book explains signs and symptoms of plagues and other diseases based on the study of ethnographic documents along with human remains.

He described a particular document from a mission priest in Florida in 1590, which chronicled a person who got pustules and then died just nine days later. Small pox and measles have similar presentations, he said, and it would be wonderful to know more.

“If you want to prevent these future things,” he said. “There needs to be more data on the past.”
...Walking through the desert in Peru in 2008 with brisk winds washing away the sand to reveal mummified children — hundreds of them.

White, along with the other travelers, questioned if it was a stampede. They soon discovered that the U.S. military had launched Tomahawk cruise missiles from a submarine, which struck an al-Qaeda-inhabited neighboring village. All that remained of the village was a hollow crater.

In the past three years, he has traveled to more than 17 countries, but one of his most remarkable discoveries was waiting for him in his own backyard.

White, along with his wife and his son, discovered the exact location of 16th-century Spanish explorer Hernando De Soto’s encampment in Marion County, right along Orange Lake on one of their ranch properties. While De Soto’s travels throughout Florida and even Marion County were previously known, the exact location of his 1539 camp was not.

In 2005, a series of hurricanes and tropical storms helped uncover a 17th-century structure, which was from the mission of San Buenaventura de Potano. Although White had found a coin 500 yards from the structure, on the edge of Orange Lake, the structure had White focused on the mission site from 2005-2009.

In 2009, White decided to excavate the site where he had previously discovered the coin. It was there that they also discovered Murano glass beads, Ferdinand and Isabella coins, chain mail armor and a pig’s jaw. It is this collection of artifacts that helped solve part of the De Soto puzzle.

“See, we know for a fact no Spanish brought pigs to the new world other than Hernando De Soto,” he said. “Just him.”

White hopes that the artifacts will put on display for the public during 2013, which celebrates Florida’s 500th anniversary. Despite more than two decades of travel, White is still very much like DeSoto, an avid explorer ready to change the world.

“It’s just fascinating … just to see the world,” he said. “The world doesn’t become bigger. It becomes bigger.”
the biggest snake that we had in our reptile collection was a 17-foot-long anaconda," Bloch initially estimated that the snake could have measured upward of 110 feet in length and was admittedly disappointed when that number was chopped in half.

But his disappointment subsided when a colleague explained that Titanoboa would have struggled to fit through the doorway of his office.

As fascinating as this discovery was, Bloch said that these attention-grabbing finds provide a gateway for scientists to teach a new audience about the bigger picture.

Bloch is very interested in the Paleocene-Eocene Thermal Maximum, which occurred 55.8 million years ago and was one of the most dynamic periods of mammalian evolution. Within a 10,000-year period, there was the first occurrence of many modern-day mammals, including primates and ungulates.

During the Paleocene-Eocene Thermal Maximum, the Earth experienced a global warming similar in some ways to modern climate change. Bloch explained that based on the current projections, the Earth could look very different in 300 years and return to "greenhouse" instead of "icehouse" conditions, meaning that there might not be any ice on the poles. Based on what he and his colleagues have learned from the fossil record, this would likely lead to changing geographic ranges of plants and animals, but what does it mean for humans? "It might not seem so bad if you're just talking about aridlands or something like that," Bloch said. "But now think about infectious diseases … many tropical diseases are pretty horrifying."

But Bloch explained that in the 1990s, many scientists began studying climate change because that was where the funding was. As a vertebrate paleontologist, he was encouraged to connect his research with this hot topic of global warming.

But what began as a need for funding has developed into a lifelong passion. Scientists have used fossils to help predict how plants and animals might respond to future climate change, resulting in data that can be used to inform predictive climate models. Many cold-blooded species, such as the Titanoboa, became large and mammals, such as horses, became very small — the size of a dog and even smaller.

"Since then I've become very passionate about using fossils to understand these kinds of questions that are important to society," he said. "I believe that the fossil record literally represents natural experiments that were run for free in the past with regards to how climate affects life on the planet. It's our job as paleontologists to go and collect the results of those experiments out of the rock usinghammers and picks"

Although Bloch spends his summers abroad in places such as Colombia, the Paraná-Camargue Basin and the Bighorn Basin of Wyoming, he's equally excited to take students to search for fossils right here in Gainesville.

He knows that not everyone has the same innate fascination with fossils and the planet, but that the discovery of Titanoboa and other larger-than-life animals will encourage others to learn more about the Earth's past, present and future.

"It does give you a little bit of a hook," he said. "As an educator, as someone associated with natural history museums, my job is to try to use things like that to teach."

An exhibit featuring a full-scale model of Titanoboa, the fossils, and clips from a Smithsonian Channel documentary, "Titanoboa: Monster Snake," will travel to the Florida Museum of Natural History and will be open to the public from Jan. 26, 2013 through Aug. 11, 2013.

For Dr. Leslie Hammond, founder and president of Artistic Eye Fine Art Services in Ocala, the past and the present constantly overlap.

When she visited Egypt as a graduate student and walked the same streets as her grandparents, who were world-traveling missionaries.

Or when she watches the news and knows that the same global conflicts that make headlines each night have spanned more than a millennium.

But it is when she is working as an archaeologist in the field that the past truly comes alive.

In Egypt in 1995, Hammond worked as an illustrator at Abydos, a cemetery site located about two and a half hours north of Luxor. At Abydos, she drew artifacts and helped an osteologist excavate one very unique vessel, which housed the remains of a fetus.

It is discoveries like these that reinforce Hammond's passion for her work. One single item can give the world a detailed look at the cultures of the past.

At the Mt. Lykaion site, she is responsible for cataloging and analyzing the artifacts that are collected each day. It is a role that she describes as "very intensive and very laborious, it's very tedious, it's a very slow process. It takes a lot of patience and at some times it can be very lonely." But for Hammond, who received her doctorate in art history and archaeology from the University of Missouri in 1998, it is currently spending her summers in Greece at the sanctuary of Zeus on Mt. Lykaion, which is located on the modern-day mountains of the Peloponnese, "It is the birthplace of Zeus, god of the sky and ruler of all gods."

"As an educator, as someone associated with natural history museums, my job is to try to use things like that to teach."

Hammond explained that identifying herself as an archaeologist often evokes a sentiment of mystery and adventure — where Indiana Jones always escapes from the pit of snakes unscathed. Although she has been on planes that have caught fire and others that were evacuated due to bad weather, she said that it can actually be a very solitary lifestyle.

"Everybody thinks it's exciting," she said. "It's an adventure, but actually it's very laborious, it's very tedious, it's a very slow progression. It takes a lot of patience and at some times it can be very lonely." But for Hammond, who is currently spending her summers in Greece at the sanctuary of Zeus on Mt. Lykaion, which is located on the modern-day mountains of the Peloponnese and has just been named a UNESCO World Heritage Site, she said that this is how they lived."