*Paleontology*

**Q&A:** Larisa DeSantis

**A Life Surrounded by Paleontology**

Originally fascinated by the conservation of biology and the study of ancient animals, Larisa DeSantis discuss her career and responds to questions about her recent research on the marsupial lion as a paleontologist.

**How did you get interested in what you’re doing?**

I did my freshman year at the University of Chicago interested in Political Science. I ended up randomly taking a paleobiology… [but I didn’t think I would enjoy it]. I looked around as to what other classes there would be and [came across] evolutionary biology. I became fascinated with the ancient past and how animals change over time. Then I went to Berkley, where I transferred in studying resource management, but I was also taking a lot of classes about paleontology… [After college], I tried not going into paleontology because, as you can imagine, there were not all that many jobs for paleontologists… Throughout my PhD, the fields were changing and merging. One thing that I was able to do was curtail my research to the field now called conservation of paleobiology.

**I’ve your article on the extinction of the marsupial lion. Can you talk about how that research came up and what you found?**

…Essentially, that study was trying to better understand the ecology of the marsupial lion, which we know very little about besides from its morphology…We really wanted to know [what] this animal was actually doing [while it was alive]. We found that the animal was highly specialized on animals in forested environments…probably an ambush hunter who would hunt animals either from cover or even from the trees which were primarily forest browsing animals.

**I know you worked with a team of paleontologists from the University of Queensland in Australia. Can you talk about how you worked together while you were here in Nashville?**

A lot of things happened about 350,000 years ago in Australia. You have aridification, or pronounced drying out of the continent. Around 60,000 years ago you have people coming over…Both the decline in prey and also the reduction in the ability to hunt probably led to their demise.

…I typically go to Australia either once a year or once every two years for a longer period of time. I drill the teeth and take an animal sample or I mold the teeth and capture a replica to analyze it under my microscope back here at Vanderbilt.

**Why Australia?**

In Australia…we’re seeing more sheer climate change today. We’ve seen over the past 15 million years a landscape that went from forest over the entirety of Australia, to now having a red center where there are no trees. Understanding how that process plays [out] and how it affects these animals is really critical to understanding what may happen in the future in regards to climate change.

**What were some issues that you faced while you were working on this project, if you faced any?**

One challenge is getting access to actual specimens. Carnivores in general are rare in fossil collections because they’re rare on the landscape. There are fewer mountain lions then there are deer, then there are plants. Because of this triangular pyramid, it’s the same thing with fossils… I think it’s really critical that we do examine those.

**Do you work on other parts of the world as well?**

Right now, we’re in the middle of a five-year career grant, which is a large grant from the National Science Foundation to focus on Australia on this large project…I also do research on other parts of the world such as the La Brea Tar Pits in southern California…I have a project going with collaborators in Asia. I’ve got a project going in Colombia. We’re also doing a project up in the Artic in Alaska and in Canada. We’ve basically worked on all continents besides Antartica.