

My dream of visiting every pile of rocks in Australia

Sarah Crews follows up with a report on her latest visit to Australia to search for Selenopidae

In May 2019, I had the good fortune to be invited to accompany two botanists to Queensland to work on *Cycas*. What?! Plants!? Well, I'll never pass up a trip to uncharted (or even charted) selenopid territory. I must fulfill my dream of visiting every pile of rocks in Australia.

The botanists were Manuel Luján, at my institution (California Academy of Sciences),



and Patrick Griffith from the Montgomery Botanical Center in Florida. I was the general factotum, guide and troubleshooter on the trip, getting the opportunity to search for my beloved *Karaops* whenever I could.

With *Karaops* it can be either feast or famine. Every place I'm sure they will be, I can't find them. Every place I'm doubtful they will be found, they are swarming all over the place. Rarely do the stars align, at least in Queensland.

Around Coen I was able to collect several specimens of *Karaops monteithi*, including the undescribed male. There had been some sightings of *Karaops* near Cobbold Gorge, and looking around in that area produced members of a new species.

Granite Gorge is nearby and looks like it would be full of selenopids – but there were

only vicious rock wallabies to be found.

There were more surprises at Mt. Surprise Station where I found... guess... another new species. But then I went to Porcupine Gorge – prime selenopid habitat – nothing. Admittedly my time there was brief. (Just because I don't find them definitely doesn't mean they aren't there.)

We headed toward Boodjamulla where I was sure we would find a new species... and we did. However, we looked around Mt. Isa where they had supposedly been seen and found nothing.

On the way back we stopped at the Mary Kathleen mine. When I drove up, I thought "Oh, we'll be out of here in 15 minutes with a ton of *Karaops*." Two people looking for three hours and... nothing! Nary an eggsac or a shed skin. So, it's a pile of rocks I'll need to revisit. I cannot accept that they do not live there. I will not take no for an answer.

As we continued our drive we stopped at a little rest area in the Drummond Range. I wasn't even really looking for selenopids there... BUT, we found them there as well.

At Mt. Inkerman Lookout, which is especially interesting because it is an isolated hill surrounded by flat farmland, I found more.

Growing them on

Arachnologists determine species by looking at spider genitalia. Subadult spiders, however, do not have genitalia. In some locations I only had sub-adults. It would be such a shame to find new species and verifying them with DNA, yet to be unable to describe them.

Luckily, one of Robert Whyte's colleagues, Liam Bromley, took on the task of rearing a significantly large number of specimens. As a result many new species will have full, valid descriptions from multiple specimens.



They aren't difficult to rear... but it does take a lot of patience and focus since they take a while to mature. As of this writing, more than a year later, there are some that are still not adults.

When I returned to California, I received a loan from the Queensland Museum, with a number of selenopids Robert Raven had fossicked out of the collection. They were from areas near where some species had been found previously, so I assumed they would be those species. Guess what... They weren't. And they were new.

I was actually supposed to have done another trip with Manuel this year – it was going to be

great!

But then coronavirus came along. The good thing, though, is that it has provided me with plenty of time to get the new species described. This means things are looking good for being able to submit a paper this year, and with the new material continuously arriving, for years ahead.

Images: Opposite page Mt. Surprise Station, above Dinosaur Stampede NP, bottom left *Karaops* sp. n., O'Brien's Creek, bottom right *Karaops* sp. n., Boodjamulla.

